

KNOWLEDGE-BASED INTEGRATED SUSTAINABLE AGRICULTURE AND NUTRITION (KISAN) PROJECT

YEAR TWO ANNUAL REPORT — JULY 1, 2013 – JUNE 30, 2014 CONTRACT NUMBER AID-367-C-13-00004

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ACRONYMS

AEC Agro Enterprise Center

AFN Antenna Foundation Nepal

AFSP Agriculture Food Security Project

Al Artificial Insemination

AT Agriculture Technician

BDSO Business Development Services Officer

CBO Community-Based Organization

CC Collection Center

CDO Chief District Officers

CEAPRED Center for Environmental and Agricultural Policy Research, Extension and Development

CFUG Community Forest User Group

CIP Climate Intervention Project

COP Chief of Party

CSISA Cereal Systems Initiative for South Asia

CYMMIT International Maize and Wheat Improvement Center

DADC District Agriculture Development Committee

DADO District Agriculture Development Offices

DC District Coordinators

DCO District Cooperative Office

DDC District Development Committee

DEPROSC Development Project Service Center

DIP Detailed Implementation Plans

DLS District Livestock Services

DOA Department of Agriculture (Nepal)

DPHO District Population and Health Office

DRR Disaster Risk Reduction

DS Direct Seedling

DWSO District Water Supply Offices

FG Farmer Group

FINGO Financial Intermediary Non-Governmental Organization

FM Frequency Modulation

FS Foundation Seed

FTF Feed the Future

GATE Global Agri-Tech Nepal

GHI Global Health Initiative

GIS Geographic Information System

GON Government of Nepal

GUC Grants under Contract

HH Household

HKI Helen Keller International

HMRP Hill Maize Research Program

HVAP High Value Agriculture Product

ICCA Initiative for Climate Change Adaptation

ICT Information and Communication Technology

IDE Integrated Development Environment

IEE Initial Environmental Examination

INGO International non-governmental Organization

IPM Integrated Pest Management

IPM-IL Integrated Pest Management – Innovation Laboratory

IPNS Integrated Plant Nutrition System

IT Irrigation Technician

JT Junior Technician

JTA Junior Technician Assistant

KISAN Knowledge-based Integrated Sustainable Agriculture and Nutrition Project

LDO Local Development Officer

LIBIRD Local Initiatives for Biodiversity Research and Development

LOP Life of Project

LSP Local Service Provider

MEDP Micro Enterprise Development Project

MFDB Micro Finance Development Bank

MF Microfinance

MFI Micro Finance Institution

MIT Micro Irrigation Technology

MOAD Ministry of Agriculture Development

MOHP Ministry of Health and Population

MOU Memorandum of Understanding

MPC Market Planning Committees

MSFP Multi Stakeholder Forestry Program

MSNP Multi-sector Nutrition Plan

MT Metric Ton

MUS Multiple Use of Water Systems

NARC Nepal Agriculture Research Council

NCCSP Nepal Climate Change Support Program

NGO Non-Governmental Organization

NNFSS National Nutrition and Food Security Secretariat

NPAC National Project Advisory Committee

OCAT Organizational Capacity Assessment Tool

PACT Project for Agriculture Commercialization and Trade

PCV Peace Corps Volunteer

PO Program Officer

PERSUAP Pesticide Evaluation Report and Safe Use Action Plan

PPP Public Private Partnership

RISMFP Raising Income of Smallholder Farmers Project

RSDC Rural Self-reliance Development Centre

SACCO Saving and Credit Co-operative

SDF Social Development Forum

SDC Swiss Agency for Development and Cooperation

SEAN Seed Entrepreneurs Association of Nepal

SQCC Seed Quality Control Center

SuDECC Sustainable Development and Environment Conservation Center

SWOT Strength, Weakness, Opportunity, and Threat

TOT Training of Trainers

USAID/Nepal United States Agency for International Development in Nepal

USG United States Government

VDC Village Development Committee

WASH Water and Sanitation Health

WI Winrock International

WIKISAN Web Interactive Knowledge-based Integrated Sustainable Agriculture and Nutrition

WUG Water User Group

INTRODUCTION

The United States Agency for International Development in Nepal (USAID/Nepal) awarded Winrock International a contract on February 14, 2013 for the Knowledge-based Integrated Sustainable Agriculture and Nutrition (KISAN) Project. This project is a part of the Global Presidential Initiative, Feed the Future (FTF), and is the flagship food security project of USAID/Nepal. The Project's overall goal is to sustainably reduce

poverty and hunger in Nepal by achieving inclusive growth in the agriculture sector, increasing the incomes of farm families. The project is implemented in collaboration with two key Nepali organizations: Center for Environmental and Agricultural Policy, Research, Extension, and Development (CEAPRED) and Development Project Service Center (DEPROSC). Initially KISAN was designed to work in agriculture and nutrition activities. During Year Two (Y2), the contract was modified and KISAN is focusing only on agriculture. Year One (Y1) of the project was from February 14, 2013 – June 30, 2013 covering only 4.5 months. Y2 is the first full year of the project.

KISAN is working in all twenty districts – ten districts in the Bheri and Rapti Zones of the Mid-Western Development Region; six districts in the Mahakali and Seti Zones in the Far-Western Development Region; and four districts in the Lumbini Zone in the Western Development Region. This multifaceted project is increasing agricultural production and incomes. As per the contract (Section C.4.8.8 and F.4), Winrock must submit an annual progress report up to 30 days following the end of each year. The annual report describes the accomplishments as compared to the targets and work plan. The Y2 annual report covers the period from July 2013 to June 2014.

ANNUAL HIGHLIGHTS

Major KISAN activities in Y2 are as follow:

- KISAN has provided 32,976 farmers USG supported short-term agricultural sector productivity or food security training, bringing the cumulative total to 33.036 individuals trained.
- KISAN has provided 33,245 farmers from 1,656 groups one-hour orientations on savings and credit during the one-day trainings at the time of group formation.
- KISAN conducted over 6,000 trainings for KISAN beneficiaries including:
 - o 99 trainings on cereal crop and lentil seed production, and 43 trainings on maize seed production techniques
 - 5,679 trainings on vegetable production
 - o 289 trainings on rice, maize, and lentil production
 - Three business plan trainings for FINGO/MFDBs and eight linkage building meetings
 - o 14 microfinance TOT for staff and change agents in all 20 districts
 - LSP savings, credit, and basic bookkeeping TOTs in all 20 districts
 - I,588 one-day Nursery Management and Crop Production Management trainings, access to finance etc.
 - o 937 one-day Crop Production Management and Marketing trainings, access to finance, etc.
 - o 1,688 mobile Crop Plantation/Plant Protection, Post-harvest and Marketing trainings, etc.

- 274 LSPs trained on improved agriculture production, business planning, gender sensitivity, environmental impact, etc.
- KISAN held a total of 519 demonstration events in farmers' fields on plastic houses with drip irrigation for off-season vegetable production; rice, maize, and lentil seed production; bio-pesticide technology; storage technology; and irrigation.
- KISAN formed 401 farmers groups in Y2, bringing the cumulative total to 1,572 groups.
- KISAN conducted exposure visits for 237 farmers, LSPs, and agrovets to CSISA, HMRP, IPM-IL, and CEAPRED Sites, and an additional eight intra district exposure visits of change agents to KISAN lead farmers' plots.
- The project assessed a total of 156 MPCs/CCs/haat bazaars and 69 SWOT were completed. As a result, 30 non-functional MPCs were revived in 11 districts, 15 new MPCs/CCs were formed, and two registered in DADO (Dailekh and Banke).
- KISAN established a national project advisory committee (NPAC), and conducted two meetings.
- KISAN mobilized financial intermediaries (cooperatives, MFDBs, and FINGOs) to disburse for agriculture loans to KISAN groups between December 2013 and June 2014.
- The project established MOUs and contract agreements between five seed companies and additional key seed farmer cooperatives and KISAN farmers. KISAN also established linkages with 46 Savings and Credit cooperatives, 11 MFIs, and four Financial Institutions.
- In collaboration with DADO and WUPAP, KISAN completed 26 irrigation schemes and provided 40 trainings on maintenance trainings to irrigation user groups.
- Staff conducted a seed sector assessment, and identified seed pockets in all ten Mid-West districts and 24 potential seed traders/companies in project districts. Farmer-to-Farmer volunteer Mr. Gurbinder Gill, in coordination with KISAN, further assessed the seed sector in project areas and identified key issues including a lack of varietal development and maintenance, quality maintenance, and poor post-harvest practices.
- Consultant Dr. Kerstin Hell assessed ways that KISAN can improve post-harvest handling of cereals and high-value vegetables. The assessment found that most crop loss is due to fungus and rodents at the household level.
- Consultant Tom Green assessed strengths and weaknesses of existing market chains, indicating that losses could be reduced and farmers
 could get better prices by improving packaging and transportation. He recommended that KISAN help key collection centers and
 wholesale markets along the Kathmandu, Butwal, Nepalgunj, and Surkhet corridor improve their strategic plans.
- WIKISAN location applications version (3.0) was deployed on June 5, 2014, more than 137 users have been created in WIKISAN for
 data entry and to manage the process in the districts. Data entry is ongoing: to date 1,821 groups, 7,066 trainings, and 35,772 individuals
 have been entered in WIKISAN.

- Staff developed and disseminated extension messages and market price information through FM/radio and other media on improved technology in six districts.
- The project built linkages between change agents and other market actors including cooperatives, MFIs/Savings and Credit groups, and MIT dealers through over 30 interaction meetings and workshops.
- KISAN, with the Government of Nepal's (GON) World Bank-supported Nepal Agriculture and Food Security Project (AFSP), organized a joint formal launch on July 23, 2013 in Kathmandu. The launch was led by the Ministry of Agricultural Development (MOAD).
- An Inception Workshop, conducted in conjunction with the Integrated Pest Management- Innovative Laboratory (IPM-IL), was held in Nepalgunj to introduce the project to people in the region.
- KISAN has established formal collaborative partnerships with one INGO, multiple financial intermediaries, and multiple cereal companies.

See Annex VII for Success Stories from Y2.

I. COLLABORATION AND COORDINATION EFFORTS

Throughout Y2, KISAN has continued to establish rapport and coordinate with multiple stakeholders at national as well as district levels to optimize benefits for project beneficiaries.

PROJECT LAUNCH

USAID, MOAD, and the Ministry of Health and Population (MOHP) formally launched the KISAN Project on July 23, 2013 in Kathmandu at a joint event with the World Bank-funded Agriculture and Food Security Project (AFSP) (see Annex III). The two projects are part of larger global initiatives and both utilize integrated agriculture and nutrition approaches to combat food insecurity and chronic malnutrition. Nepal is unique as it is the only country where both global projects integrate these approaches. KISAN will be closely aligned with the AFSP throughout the project period, will exchange lessons learned and best practices, and will seek to avoid duplication of activities within districts. Representatives from USAID, MOAD, and MOHP signed a symbolic Partnership Agreement to reiterate USG and GON's commitment to combating food insecurity and malnutrition through the KISAN Project (See Annex II). Since the launch, KISAN has been modified to work only in agriculture but will coordinate with the Suahaara project to integrate nutrition and agriculture activities.

MID-WESTERN INCEPTION EVENT

On July 31, 2013, USAID, together with the MOAD and MOHP, presented two food security projects, KISAN and the IPM-IL, in the Mid-Western, Western, and Far-Western Regions to agriculture and health authorities at a joint event in Nepalgunj. The event informed national and regional stakeholders about the objectives and expected impacts of the two new projects. For a complete list of major events carried out in Y2, see Annex IV.

COLLABORATIONS AND PARTNERSHIPS

In addition to the formalized linkages with the GON's agriculture agencies, KISAN has established institutional linkages with a number of non-government agencies/development projects, private sector organizations, and financial intermediaries active in the KISAN zone of influence areas as outlined in the following section. Key efforts are outlined in the table below.

Organization Type Activities			
GON	<u> </u>		
DDC	KISAN worked with the DDC which provided material support for haat bazaar formation		
DADO	DADOs have supported formation of new CC/MPCs and expansion of a haat bazaar; conduct district-level agriculture exhibition; provided grant support to farmers to purchase diesel and electric pump sets; agri-inputs support: seeds; plastic house; vegetable shipping crates; fertilizer for demos and cooperatives; MIT technology and support; compost-making; shed-improvement; trainings; IPM technologies and materials		
VDC	VDCs have supported farmers for production of off-season commercial vegetables to purchase sprayer/agriculture lime and cereals and vegetable seeds through local subsidies; income generation and expansion in collection center; water harvesting tank support; canal rehabilitation; electric motors for pumps; drip irrigation; sprayers; krishi electric pole; weighing balance; shallow boring; fencing, etc.		

Table I. Coordination and collaboration with GON and other stakeholders				
Organization Type Activities				
Helvetas	This INGO helped farmers in production of off-season vegetable production in plastic tunnels; provided material support to haat bazaar/MPC; supplied irrigation pond with taps			
Other Agriculture Initiatives				
RISMFP; PACT; HVAP; NCCSP	These high-value agriculture projects have provided grants to farmers and groups to establish vegetable input support; plastic houses to produce off-season vegetables; seed; crates; plastic ponds; agribusiness promotion; support to establish new collection centers/MPC			
Private Sector				
GATE; Gyan Agri Product	KISAN facilitated linkages between KISAN farmer groups and commercial seed firms to buy farmer produced seeds			
Cooperatives and groups				
Zenith multipurpose Cooperative; Sagarmatha Micro enterprise development; Kalika Community forest; Maha vegatable production coopertaive; Awaj and community; creative enterprise development center; bhedbari community forest KISAN has worked with cooperatives and community forest to mobilize credit to provide loans to farmer groups that in the provision of watering cans (26pcs), sprayers (2pcs), and supported commercial production and demonstration plots were also used to establish collection centers and provide foundation cereals and vegetable seeds				
NGOs				
NARC; LIBIRD; RSDC; SuDECC; CEAPRED; Practical Action(Nepal), CARITAS	These organizations supported farmers to purchase inputs for vegetable production; conduct agricultural activities; purchase quality foundation seeds for KISAN seed groups in cereals and vegetables; and promote and implement gravity ropeway (pulley system to transport produce) in rural areas			

A. GOVERNMENT OF NEPAL

I. NATIONAL PROJECT ADVISORY COMMITTEE MEETINGS

Throughout Y2, KISAN has maintained coordination with Government of Nepal counterpart agencies through central as well as district-level interaction events. In October 2013, USAID and GON established the KISAN National Project Advisory Committee (NPAC) under the Chairmanship of Dr. Rajendra Prasad Adhikari, Joint Secretary, Ministry of Agricultural Development (MOAD) to support the project throughout the project period. The committee consists of senior representatives from the Ministry of Agriculture Development; the Ministry of Health and their related departments; and others including the Agro Enterprise Center (AEC), National Planning Commission (NPC), and Nepal Agriculture Research Council (NARC). The first NPAC meeting was held in October 2013, and the second one in April 2014. The meetings have consolidated integration of KISAN activities in GON systems: the committee decided that District Agriculture Development Offices (DADO) and District Population and Health Offices (DPHO) will include the agenda/status of KISAN in multispectral nutrition and food security steering committees (NFSSC) as well as DADC meetings. Accordingly, DADOs are to include KISAN activities and report the status through their system. Moreover, NPAC members, with the support of KISAN, have committed to take necessary actions regarding the decisions made and will communicate these to their relevant district, regional, and national-level institutions to implement the decision. KISAN is planning a field visit to the project areas for NPAC members to observe firsthand the project activities being conducted. Following the finalization of the KISAN Modification Contract, continued engagement of the valuable time of Ministry of Health representatives to attend NPAC meetings will have to be assessed. KISAN activities will be limited to agriculture activities and will no longer be implementing health and WASH activities.

2. REGIONAL-LEVEL KEY GON MEETINGS

Throughout Y2, KISAN Senior Management members have attended MOAD-organized Regional Planning Workshops and Regional Monitoring Workshops in Mid-Western, Far-Western, and Western Regions. KISAN integration in GON agriculture offices has been noteworthy. Some DADOs and Regional Directorate Services (RDS) are already presenting KISAN project status in their reports. MOAD has committed support for this process by communicating with relevant departments to invite KISAN and other development partners to relevant regional and central-level programs and meetings.

In addition to the formal NPAC meeting, KISAN staff participated in several meetings with GON to foster collaboration for activity implementation this year.

• KISAN staff held an introductory meeting with the Under Secretary of Ministry of Finance, Kailash Pokhrel, on October 1, 2013 to formally introduce the KISAN Project to the Ministry.

- KISAN staff met with the Ministry of Federal Affairs and Local Development (MOFALD) Under Secretary, Ramesh Kumar KC, on
 October 1, 2013 to seek his support for the project, to request that he send official letters of introduction about the KISAN Project to
 Local District Officers (LDOs) in the KISAN working districts, and to facilitate GON coordination with KISAN efforts.
- KISAN senior staff also met with staff from NARC, including the Executive Director of NARC, Dr. Dil Bahadur Gurung, and Planning Director, Dr. H.K. Manandhar, on a number of occasions during the year. As a result, NARC has nominated three Regional Directors from the Regional Agriculture Research Stations (RARS) in Doti, Kaski, and Banke as the focal points for KISAN to facilitate coordination and for necessary technology support.

In the last week of December 2013, there was unprecedented reporting in local newspapers alleging that the Feed the Future Implementation Plan 2011-2015, its multiyear strategy, and the 2011 Assessment Report all promote genetically-modified organisms (GMO), not only in maize, but also in rice crops. KISAN, at the request of USAID, arranged meetings between USAID and MOAD to clarify that USAID will not be promoting GMOs through the FTF program. Senior staff met the Secretary MOAD, Joint Secretary Agribusiness MOAD, and the senior officer of the Seed Quality Control Center to clarify FTF/KISAN's stance on GMOs, and to reassure that no KISAN FTF documents or plans mention promotion of GMOs or any related companies in any way. MOAD issued an official clarification/statement of the situation in the following day's newspaper. See Annex II for additional information.

3. DISTRICT AGRICULTURE DEVELOPMENT COMMITTEE MEETINGS

At the district level, KISAN is working with the DADC as the KISAN district-based coordinating body. DADC meetings have been instrumental in designating VDCs for KISAN. Staff continue to meet and liaise closely with the DADCs to share district-specific Detailed Implementation Plans (DIP), project progress, and other areas of cooperation.

Meetings have been conducted with District in all 20 KISAN districts. As of Y2, KISAN with DADCs and DADOs to finalize selection work.

4. DISTRICT AGRICULTURE

At the district level, GON District Agriculture been the principal collaborative partners in effectiveness of KISAN trainings. KISAN has

Figure 1. KISAN farmers transplant rice seedlings during a National Rice Day event

Development Committees (DDCs) staff in all 20 districts have worked of 336 VDCs where KISAN will

DEVELOPMENT OFFICES

Development Offices (DADO) have extending the reach and coordinated with DADOs in a range

of activities including agriculture fairs, MPC formation, reservoir construction, plastic house construction, and access to inputs such as seed. Collaborative activities with DADOs have included Shed Improvement and Farm Yard Manure (FYM) programs; National Rice Day events on June 29, 2014; and annual district and regional agriculture fairs. Likewise, KISAN has conducted joint monitoring with district stakeholders i.e. DDC, DADO, District Cooperative Offices (DCO), District Water Supply Offices (DWSO), and journalists in coordination with DADOs in Salyan, Dang, and Rukum.

Agriculture fairs and exhibitions

KISAN has participated in fairs and exhibitions to promote agriculture technologies and showcase interventions being carried out in respective districts. In Y2, KISAN has provided some support to conduct fairs in 13 districts to encourage farmers to cultivate local produce. KISAN

groups have demonstrated a range of including plastic house technology, drip nurseries with plastic nets, etc. Many of the awards for their products and technologies, and plastic house demonstrations as outlined KISAN technical expertise has also been Coordinators (DCs) have been part of evaluation.

In addition to agriculture-related events in participated in events that can potentially Banke, Bardia, and Dang together with two participated in a Farm Mechanization fair in Department of Agriculture (DOA, Nepal) The event helped participants establish



Figure 2. A KISAN stall at agriculture fair demonstrates plastic house technology for growing off-season vegetables

improved agricultural technologies irrigation technology, raised bed participating farmers have received such as for effective IPM practices in relevant sections in this report. mobilized: many District judging panels for agriculture product

the KISAN districts, KISAN has impact KISAN activities. Staff from participants each from these districts Chitwan organized by the and NARC on February 21-24, 2014. linkages with other farmers and

traders, and to learn about the importance of farm machines in agriculture. Participants have become motivated by observing and interacting with dealers and are planning to introduce suitable farm mechanization equipment in their village or groups.

Coordination for decentralized governance

KISAN has facilitated linkages between KISAN beneficiaries and Village Development Committees (VDC) in order to maximize opportunities to leverage government funds through the national decentralized governance mechanism. KISAN staff has worked with KISAN groups in all 20

districts to help them engage in the local annual budget disbursement process through the formal 14-step process at VDC and district levels, including in VDC and district council, review, and planning meetings. KISAN staff has engaged with Citizen Awareness Centers (CAC) within project wards, district Integrated Planning Committees (IPC), and District Development Committees (DDC). This level of involvement has helped establish rapport with district authorities, and fostered agriculture grants KISAN groups in all 20 districts. Details are presented in the leverage section.

5. COLLABORATING WITH GON'S NEPAL AGRICULTURE FOOD SECURITY PROJECT

KISAN is working closely with the GON's AFSP which is to be implemented in the Mid-Western and Far-Western Development Regions. The two projects shared their respective approaches and VDC selection criteria with each other to facilitate coordination at all levels. KISAN also participated in the AFSP Central Orientation Program held in the MOAD on October 31, 2013. During hill district DADC meetings, KISAN worked closely with AFSP staff and DADCs in the relevant districts to select VDCs and ensure that there is no overlap. Moreover, KISAN has included AFSP representatives in the KISAN NPAC, and will continue to seek avenues for collaboration directly with AFSP and through the NPAC platform.

6. OTHERS

Department of Agriculture and NARC

As outlined above, KISAN in cooperation with NARC, DOA, AEC, and Cereal System Initiatives in South Asia (CSISA), took participants (farmer/mechanization dealers) from Banke, Bardia, and Dang districts to the farm mechanization fair in Chitwan. This event has created linkages and raised awareness among farmers and traders regarding the importance of farm mechanization in agriculture.

Multi-Sector Nutrition Plan

KISAN is committed to the national food security agenda and, although the project will no longer be implementing nutrition and sanitation interventions, continues to participate in the Multi-sector Capacity Development Working Group/National Nutrition and Food Security Secretariat (NNFSS) hosted at the National Planning Commission. Throughout the year, KISAN has participated in a series of planning meetings as committee members. KISAN has also reviewed and provided inputs to the agriculture-related capacity development master plan being developed as part of the Multi-Sector Nutrition Plan (MSNP). KISAN will work with the MSNP pilot activities in Kapilvastu and Accham in coordination with the respective DDCs and their DADCs.

B. FEED THE FUTURE PROJECTS IN NEPAL

KISAN works with other USAID/FTF partners in Nepal to identify best practices and lessons learned to scale up within the KISAN Project. KISAN is working closely with its partner DEPROSC to facilitate FTF KISAN Component C Business Literacy project and will work with the Global Health Initiative (GHI) Suahaara Project. Component C will provide literacy and Suaahara will provide nutrition interventions to KISAN beneficiaries in common working areas.

The two FTF projects supporting KISAN are CSISA and the Integrated Pest Management-Innovation Laboratory (IPM-IL). KISAN is also coordinating with the Hill Maize Research Project (HMRP), and will seek support from the Livestock–IL once KISAN's livestock activities are underway. KISAN is also aligned with USG's Peace Corps Program, as well as USAID's Farmer to Farmer (F2F) project.

I. FTF KISAN COMPONENT C BUSINESS LITERACY

In the latter part of Y2, USAID awarded the FTF Component C USAID's Business Literacy Project in Nepal to DEPROSC. Through this award, DEPROSC will address FTF Outcome 9 "Increased resilience of vulnerable communities and households through skills development." The program integrates vulnerable groups through literacy, nutrition, life skills, disaster risk reduction (DRR) training, and entrepreneurship action-oriented education enabling women, youth, disadvantaged castes, and ethnic minorities to access agricultural and nutrition interventions. All 48,000 Component C beneficiaries will be selected from KISAN groups.

2. SUAHAARA

KISAN has been informed that USAID's Suahaara Project will be working in four KISAN districts (Baitadi, Doti, Accham, and Dadheldhura) to improve nutrition and sanitation practices. The KISAN and Suahaara Chief of Party (COP) have held discussions to ensure coordination for the smooth rollout of Suahaara's nutrition and sanitation interventions in KISAN beneficiary communities.

3. CSISA

KISAN continues to coordinate with the CSISA and IPM-IL project, and has carried out technology-specific field demonstration events for farmers in common change agent fields. The demonstrations have taught farmers efficient rice, maize, and lentil cultivation techniques and technologies.

In coordination with the CSISA project, KISAN conducted commercial spring maize demonstrations for farmers to show farmers improved technologies, and to demonstrate a number factors that affect the crop yields. These include differences in varietal output between hybrid (Rajkumar) and improved (Arun 2) cultivars; fertilizer doses; methods of sowing (broadcasting and line sowing); hand planting versus agrimechanization, in this case the use of jab planters; and inputs such as irrigation, etc.

CSISA is preparing a set of recommendations for KISAN to use for the rice and summer maize season. Apart from normal practices, it will include Directed Seeded Rice demonstrations and other activities. KISAN has also developed a Nepal-specific rice planting manual based on a similar one CSISA developed for Orissa in India.

4. IPM-IL

In coordination with the IPM-IL project, KISAN has increased awareness of improved IPM techniques among beneficiary farmers through demonstrations in bitter gourd and cucumber production in farmers' plots in Banke and Surkhet. The events have built awareness of IPM techniques for staff and farmers on the use bio-pesticides; proper spacing; how to make and use bio-fertilizers; and cultivation techniques such as staking. The Local Service Providers (LSP) and IPM-IL continue to demonstrate these techniques along the crop cycle. Farmers and KISAN staff are following the demonstrated technologies, and are adopting the staking approach to protect their standing crops. As part of the learning experience, pictorial representations of IPM-IL basic information were printed out as flex posters and distributed to participating farmers and agrovets.

C. PEACE CORPS

The KISAN Project continues to collaborate with the Peace Corps and looks forward to working with the newly sworn-in volunteers. Twenty-one Peace Corps Volunteers (PCVs) have been posted in three districts – Surkhet, Dang, and Pyuthan. Each district will have seven volunteers, four of which will work in agriculture and three in health. KISAN has engaged PCVs in project events and activities wherever possible. KISAN has involved PCVs in KISAN trainings and agriculture-related tasks including trainings, demonstrations, micro irrigation technology promotions, micro-credit promotion, development of MPC/CC, etc.

D. FARMER-TO-FARMER PROGRAM

KISAN is coordinating closely with USAID's Farmer-to-Farmer (F2F) Program being implemented with Winrock International to engage expertise to support the KISAN Project and objectives where possible. Winrock has fielded volunteers for two separate assignments in Y2.

Seed sector preliminary analysis

Winrock's F2F program, in coordination with KISAN, fielded Seed Expert Dr. Gurbinder Gill to assess the seed situation in project areas, and to identify opportunities to strengthen seed companies (see Annex VI for trip report). The specific objectives of the assignment were to increase knowledge on entrepreneurship development, marketing channels, and branding specifically for seed enterprises; and to assess the current situation and suggest a cross stakeholders approach towards strengthening the private seed sector in Nepal. The study highlights private seed sector enhancement by facilitating development of the value chain actors. Dr. Gill has advised seed companies on how to increase revenue,

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production, and sales. He has recommended to companies how to market and brand their seeds, identified training needs of agro-vets, and suggested business strategies for key players.

The positive outcome of this assignment has prompted KISAN to seek the services of Dr. Gill to follow up on this F2F assignment with a focused consultancy to develop the seed sector in KISAN areas further. Dr. Gill will be engaged as a short-term consultant to develop the seed sector in Y3.

E. LEVERAGING RESOURCES

KISAN trains farmers and agro-entrepreneurs on ways to maximize crop production through improved technologies and approaches along the complete agriculture value chain. To reinforce the learnings, KISAN is linking project beneficiary communities to locally available opportunities to access resources to implement new approaches in farmer fields. This approach will ensure that KISAN trainings are cost effective, establish an environment for multi-stakeholder coordination, and minimize duplication of donor-funded activities in common working areas. Throughout Y2, KISAN has worked with line agencies, locally positioned organizations, and value chain actors to facilitate enhanced services in KISAN zone of influence areas. Local actors include DADO, DDC, and partner stakeholders like WWF/TAL, MSFP/Rupantaran Nepal, USAID/ICCA, RISMFP, MEDEP, Nepal Agri-seed and Input Company, Chitwan (NASIC, Chitwan), and Bij Bridhi Pvt. Ltd. Chitwan. KISAN is also working with cooperatives and other financial intermediaries including Nirdhan Uthan Laghu Bittiya Bank for credit support to farmers in the Mid- and Far-West. Responses from these stakeholders have been positive. Although VDC assemblies of all the West and Far-West VDCs had been done by the time KISAN began implementation in the districts, some VDC secretaries are willing to integrate the 15% agriculture portion of the VDC annual budgets in KISAN groups.

KISAN staff met with private companies and GON representatives to coordinate and leverage resources to promote public/private investment. KISAN leveraged funds from a varieity of sources, but primarily from financial institutions through credit/loans disbursed to farmers. KISAN linked cooperatives to MFDBs and FINGOs so they could access wholesale loans and provided training to staff and organizations. KISAN leveraged other other private sector investment from local grain aggregators who have established buy-back agreements with farmers. This is likely to increase in coming years as KISAN continues to establish linkages between more private sector players and KISAN beneficiary groups.

LEVERAGE TRAINING AND MAPPING

KISAN staff in all 20 districts has been trained on how to leverage funds from GON, private sector, and other projects. The training oriented the field staff on GON's decentralized funding approach through the GON 14-Step process. This training will help staff train beneficiaries to leverage funds for collection center infrastructure needs, water system, and other investments that will support KISAN's outcomes. Following

the leverage training, all districts have developed district-specific stakeholder lists to identify all public and private entities active in KISAN working areas, and to map potential organizations and areas for collaboration. The mapping exercise has helped speed up opportunities for synergy. KISAN conducted nine one-day trainings for staff in the 20 districts. The trainings highlighted the annual VDC block grant cycle and timeline, and GON's 14-Step Fund Allocation Process. Following the trainings, staff in all districts mapped existing initiatives, the organizations, and their work to identify potential ways to collaborate.

I. LEVERAGING FROM GON

KISAN trained district-based staffon how GON's decentralized DDC and VDC grant mechanism process works to help community members access VDC funds. The process is bottom-up, and begins with interested communities/groups submitting proposals for VDC grants at the ward level in October. The proposals are then screened in various stages; the process culminates in approval from VDC and DDC council meetings in February. In Y2, KISAN has worked with communities in the Mid-West and some in the West and Far-West to organize beneficiaries and stakeholders to access these funds to contribute to key infrastructure such as collection centers, water systems, storage systems, and other communal infrastructure. The training prepared staff to start thinking about how to leverage local government funds.

The level of collaboration between GON and KISAN at the district level has been exemplary, providing opportunities for coordinated technical services as well as in the form of hardware for KISAN beneficiary groups. The KISAN team has provided a range of specialized technical advisory services to VDCs and communities, including agriculture-related cultivation and post-harvest techniques and technologies, as well as irrigation system design and management. DDCs and VDCs have provided grants to KISAN beneficiaries to implement newly learned approaches, for example KISAN has designed irrigation schemes and VDCs have constructed them. Other examples are listed in the table below.

Table II. Coordination and leverage with GON

GON entity	District	Activity
DDC	Bardiya	Material support for the expansion of a haat bazaar/MPC
DADO	Banke	Support to establish a new CC/MPC
	Banke, Salyan	Diesel pumps
	Surkhet	Electric motors

	Dailekh, Surkhet, Jajarkot, Dang, Salyan, Rukum, Rolpa, Banke	Agri-inputs support: seeds; plastic house; crates; fertilizer; MIT technology; compost-making; shed-improvement; trainings; MIT support; IPM technology/pesticides; district-level agriculture exhibition; National Rice Day program
VDC	Dang	Sprayer/Agriculture lime support
	Dang	Water harvesting tank support for vegetable production
	Rukum	Support to repair and strengthen an older collection center
	Rolpa, Surkhet	Canal rehabilitation
	Banke, Surkhet	Electric motor, seed bin, sprayers, krishi electric meter/pole, weighing balance, shallow boring, fencing; support to establish a new collection center/market place
	Bardiya, Jajarkot, Dang, Salyan, Rukum	Agri-inputs support: seeds; plastic house; crates; fertilizer; MIT technology; compost-making; shed-improvement; trainings; MIT support; IPM technology/pesticide
	Dailekh, Pyuthan	VDC irrigation interventions

2. NON-GOVERNMENT LEVERAGING

The KISAN team is facilitating beneficiary groups to take advantage of other funding opportunities that can improve their food security by implementing what they have learned in KISAN trainings in their fields, establishing infrastructure, etc. Such opportunities include cost-share grants from the Asian Development Bank's (ADB) Raising Incomes of Smallholder Farmers Project (RISMFP) and the World Bank's (WB) Project for Agriculture Commercialization and Trade (PACT). KISAN first built the capacity of communities to implement the improved techniques and technologies in agriculture production, and then assisted beneficiary groups in the Mid-West to develop project proposals to strengthen group agriculture practices. KISAN has signed MOUs with Helvetas, Agricare, GATE Nepal, and a number of financial intermediary organizations including Mahila Sahayatra MFI. KISAN continues to explore partnerships for agricultural commercialization, multiple use water systems (MUS),

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agricultural mechanization and agricultural marketing, investment in agricultural inputs (seeds, fertilizers, and plant protection mechanisms), and has held interactions with MSFP (Multi-sector Forest Programme), Danish Church Aid (DCA), and Malika Bikas Sastha.

In the Far-West, teams are also coordinating with the Strengthening the Accountability of Local Government Project (SALGP) to collaborate in district activities. This program is designed to increase accountability and responsibility of local government bodies in districts, and to foster rapport between service providers and seekers.

KISAN has signed an MOU with Helvetas to complement efforts in common beneficiary communities. The formalized document was signed between KISAN and Helvetas, with the understanding that it represents Swiss Agency for Development and Cooperation (SDC) and other Swiss-funded programs in Nepal. Helvetas is interested in strengthening field activities with KISAN's support by prioritizing already established local community social structures like farmers groups, marketing committees and VDC-level agriculture, forest and environment committees, etc. The two teams have since developed activities for joint implementation in common VDCs and beneficiary groups. Between December 2013 and June 2014, KISAN has leveraged funds from Helevats and other non-government partnerships as presented in the table below.

Table III. Coordination and leverage with multi-stakeholders

Collaborating Agency	District	Inputs Provided or sold by Collaborating Agency to KISAN Beneficiaries	
NARC and seed	Banke,		
cooperatives (with	Bardiya,	Made lentil source seed available to KISAN farmers	
DADO)	Dang		
LIBIRD	Dang	Agri-inputs support: seeds; plastic house; crates; fertilizer; MIT technology; compost-making; shed-improvement; trainings; MIT support; IPM technology/pesticides	
RISMFP	Dang, Dailekh	Agri-inputs support: seeds; plastic house; crates; fertilizer; MIT technology; compost-making; shed-improvement; trainings; MIT support; IPM technology/pesticides	
MSFP with FECOFUN	Salyan, Dang	Agri-inputs support: seeds; plastic house; crates; fertilizer; MIT technology; compost-making; shed-improvement; trainings; MIT support; IPM technology/pesticides	
RSDC	Rukum	Irrigation canal construction agricultural activities	

MSFP, USAID/ICCA, LI- BIRD	Dang	District-level agriculture exhibition – 2014; material support to Rampur Haat Bazaar	
WUPAP	Rukum, Dailekh	Vegetable input support: Drip irrigation, cemented ponds, irrigation canals	
MEDEP	Salyan, Banke	Provision of watering cans, sprayers; drip irrigation; commercial production and demonstration plots in vegetables	
Climate Intervention Project (CIP), Nepal Climate Change support Program, UNDP	Rolpa, Jajarkot	Construction of irrigation systems.	

3. PRIVATE SECTOR

In view of establishing sustainable and market-led value chains in seed production, vegetable production, and production of rice, maize, and lentil, KISAN has engaged the private sector in KISAN activities. Throughout Y2, KISAN facilitated business linkages between several farmers groups and agribusiness, including GATE Nepal (Global Agri-Tech Nepal). KISAN has conducted PPP meetings with agrovets, private seed companies, seed producers, market players, and cooperatives to discuss ways to strengthen the value chain process in the local community and ensure the smooth supply of agriculture inputs at the VDC level. KISAN has linked farmers groups and cooperatives in Banke, Bardiya, and Dang to seed companies like GATE Nepal, Khajura, National Seed Company, Nepalgunj. Groups have established contract farming mechanisms to purchase and sell back quality rice seeds to GATE Nepal. Through this approach, farmers are able to purchase quality foundation seed from GATE. They have the option to sell their product, the certified seeds, back to GATE. We expect this assured seed market will encourage more farmers to invest in and raise more quality seeds. Individual farmers and cooperatives have entered into such contracts with seed companies – some of the agreements include details such as assured volume of sales and price margins, while others are open to sale to the highest bidder. Access to credit trainings is also starting to have results: between December 2013 and June 2014, KISAN service providers (cooperatives and MFIs) in KISAN areas disbursed an equivalent of US \$228,776 as agriculture loans.

The lack of commercial access to IPM products can be a barrier to adoption of IPM technologies. Agricare is a private sector enterprise that is building a country-wide supply network of agrovet products and a cellphone-based agricultural information dissemination system called Kisan Call Center. KISAN will tap into the existing Agricare network to help build the supply chain for bio-products and facilitate linkages between

Agricare and KISAN agrovets and farmers. Through the grants program, KISAN will also to work with Agricare to extend embedded agrovet services in KISAN working areas to enable KISAN farmers to access quality produce and essential information through the Agricare Kisan Call Center.

KISAN also continues dialogue with the International Finance Corporation (IFC)-supported Supporting Agribusiness Project, Nimbus, and K L Dugar Group's Bikash Rice and Flour Mill to enable beneficiary farmers to establish links to maize, lentil and rice markets. KISAN has created linkages between seed cooperatives and private companies/aggregators including GATE Nepal, Khajura; International seed Company, Kapilvastu; Nepal Agro Seed Company, Chitwan; Beej Bridhi Company, Chitwan; Malla seed suppliers, Chitwan, etc. to ensure supply of quality seed and to foster fair prices for farmers.

Likewise, in view of facilitating market linkages and local-level embedded services for lentil, rice, and maize crops, KISAN has initiated collaborations with the K L Dugar Group for lentil and rice, and with Nimbus for maize crops. Through the upcoming grants activity, KISAN envisages various opportunities to integrate private sector actors, including in the farm mechanization and livestock breeding value chains.

II. ACCOMPLISHMENTS COMPARED TO TARGETS

A. COMPONENT A, IRI: IMPROVED AGRICULTURAL PRODUCTIVITY

Component A addresses food insecurity in Nepal by increasing rural people's productivity of rice, lentils, and maize, and will increase smallholder incomes through the promotion of high-value agricultural production linked to markets and functional supply chains. The agriculture component has five outcomes:

- 1. Facilitate farmers to receive improved and increased agriculture inputs;
- 2. Improve the capacity of agriculture extension workers, service providers, farmers, health workers, and health volunteers;
- 3. Enable improved and sustainable agriculture production and post-harvest technologies and practices to be adopted at farm levels;
- 4. Facilitate improved market efficiency; and
- 5. Foster increased capacity of local Nepali organizations.

I. OUTCOME I, SUB-IR I.I: FARMERS RECEIVED IMPROVED AND INCREASED AGRICULTURAL INPUTS

The KISAN district teams improved seed production and distribution of maize, rice, and lentil seed in Y2. The objective of the seed program is to improve the quality seed production and its availability at the district as well as group level by introducing contract seed production and community based seed production. KISAN is focusing on seed production of varieties released and registered by the seed board of Nepal. Some of the promising varieties introduced in seed production are Sukha-2 and Sukha-3 in rice; Manakamana-3, Deuti, and Rampur composite in maize; and Khajura-I and Khajura-2 in lentil. KISAN has also facilitated formal agreements between seed farmers and companies that include buy-back arrangements with seed producers (the farmers).

Activity A.I.I Seed sector analysis

Seed sector assessment

The first activity to strengthen the seed sector conduct an assessment of the seed sector in seed production pockets, private sector KISAN. Banke, Bardia, and Dang were found rice and lentil seed production. The all ten Mid-Western districts, and a total of 24 project districts. The assessment concluded improve seed sector output:

- Strengthen existing seed
- Increase seed productivity through improved cultivation practices.



Figure 3. Female farmers using new varieties of seeds to improve their yields

in the Mid-Western Region was to project districts to identify potential players, and priority activities for to have the most potential in terms of assessment identified seed pockets in potential seed traders/companies in with some recommendations to

groups/cooperatives in districts.

high yielding seed varieties and

- Strengthen and coordinate with and between public and private sector service providers including agro-vets and seed companies.
- Support seed producer groups/cooperatives' efforts to produce quality seed and maintain seed cycles for improved practices for seed production.
- Provide lead farmers a complete package of production training as LSPs who can then go on to train small farmers.

- Collaborate with Nepal Agricultural Research Council (NARC) and private seed companies to produce more foundation and certified seeds to increase seed replacement rates.
- Provide entrepreneurship skills training, including how to prepare budgets and basic business management skills, to seed producer groups and cooperatives.

Following the seed sector assessment in the Mid-Western region in August 2013, the KISAN team designed training programs focusing on rice seed production, and established linkages between beneficiary farmers and seed private sector actors.

Private sector engagement in the seed sector

Winrock's F2F program, in coordination with KISAN, fielded Seed Expert Dr. Gurbinder Gill to assess the seed situation in project areas, and to identify opportunities to strengthen seed companies.

The specific objectives of the assignment were to increase knowledge on entrepreneurship development, marketing channels, and branding specifically for seed enterprises; and to assess the current situation and suggest a cross stakeholders approach towards strengthening the private seed sector in Nepal. The study highlights private seed sector enhancement by facilitating development of the value chain actors. Dr. Gill has advised seed companies on how to increase revenue, production, and sales. He has recommended to companies how to market and brand their seeds, identified training needs of agrovets, and suggested business strategies for key players. This seed assessment indicates the following issues and challenges to seed sector growth:

Lack of varietal development and

Programs that impact varietal development varieties in cereals and lentils are very limited. varieties (particularly hybrid) available in the about these varieties. Although there are internationally identified varieties and Nepal, their implementation has been very varieties grown in the KISAN districts are not Sarju-52 (OP) is very popular in the Mid- and been growing this variety for more than ten



Figure 4. KISAN established agreements with several seed companies that provide foundation seed for project farmers

maintenance

and maintenance of the newly released On the other hand, there are many new market and farmers know very little policy-provisions for registering the recommending them for production in weak. Indeed, many of the popular Indian even registered, for example rice variety Far-Western terai regions. Farmers have years, but it is not registered.

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Nepal has produced just one or two hybrid varieties of maize in recent years. However, demand for hybrid cereal seed is increasing every year and in-country production has not met current demands. As a result, imports of hybrid cereal seeds have increased to meet farmers demand.

Quality maintenance

The quality of available cereal seed has been deteriorating, prompting farmers to switch to hybrid varieties. The main reasons for quality deterioration have been identified as lack of quality supervision and control during the production process, and unavailability of quality foundation seed. Since seed quality is largely determined at the field itself, the virtual lack of supervision at the production stage equates to quality deterioration.

NARC farms are producing foundation seed (FS), although the primary mandate of the NARC is producing Breeder Seed (BS). If seed varieties are not effectively maintained in farms, especially genetic and physical purity, the varieties will deteriorate. Both the DOA and NARC farms have limitations regarding their production of the required quantity of quality FS. Moreover, they are not in a position to produce FS for all crops and varieties required by the farmers and seed companies. Likewise, the private sector players lack capacity in terms of finance, know-how, and infrastructure in foundation seed production and varietal maintenance.

Poor post-harvest activities

Most of the seeds produced and sold in the markets or sold to the seed companies are hand cleaned, sun dried, and packed in jute or polyethylene bags. Cleaning is a painstaking task for seed growers as seed processing centers are mostly located at considerable distances from growing areas. Grading is the only processing activity adopted so far by seed companies before selling seed to agrovets and farmers. Moreover, most seed production is undertaken by large number of small farmers and it is beyond their capacity to own or access modern seed processing equipment. On the other hand, there is little incentive for individual seed traders to make investments in such plants. Due to the small size of their business, the effort is unlikely to be profitable.

Concentration of seed companies/agrovets only in seed trading

Seed companies are involved only in seed trading with little to no involvement in production activities. Many of the agrovets in the project districts are family-owned or operated by a single person. In a few cases, contracting seed companies are not even aware of how much foundation seeds farmers need, or where they obtain the seeds. There is therefore poor or no control over seed quality from the farmers. Awareness is lacking at the farmer level, too – they are neither aware, nor very concerned, about maintaining market quality standards. Therefore, it is essential that seed companies be involved in the production stage.

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In fact, few seed companies have yet to emerge as good seed companies. A good seed company possesses facilities for R&D, quality control, and market promotion measures with its own brand name and variety.

Hybrid seed production program



Figure 5. Following the signing of an MOU with a seed company, this seed producer group in Pyuthan is looking forward to a sustainable business relationship

At present, there is very little work on hybrid seed production being carried out by public and private seed companies. However, there is immense scope to engage seed companies to initiate a substantive hybrid seeds production program. At this stage, there are huge prospects for seed companies to start hybrid seed production businesses as farmers are gravitating towards the use of hybrid seed. Natural agro-ecology could be a very attractive factor for producing high-quality hybrid seeds. Moreover, there are now groups of private sector actors with some experience and interest in the hybrid seed business.

Government policy on seed subsidy

The sudden change in government policy on implementation of commodity mission programs (like the maize, wheat, and lentil mission programs) in the districts has affected the availability of foundation seed for seed production. The government books or holds all the available seed from its farms, stations, and seed companies and distributes seed to

farmers through DADOs at subsidized rates, and the DADO provides these seed to the groups which are associated with them. The farmer groups which are not listed in the DADO records but still want to produce seed are not entitled to receive source seed from DADOs. Similarly, other non-government organizations cannot receive the seed from directly from farms and stations for seed production.

Activity A.1.1.2 Strengthened value chain Workshops and trainings

As mentioned in section I.E.3 of this report, KISAN has organized several meetings bringing together various stakeholders in the seed value chain including private sector seed companies, agrovets, and relevant government entities. Through these meetings, KISAN has identified and coordinated with seed companies interested in strengthening partnerships/linkages (see contract seed production, below). In Y3, KISAN will train LSPs including seed companies and some agrovets in effective business promotion.

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Contract seed production

The KISAN team has facilitated linkages between KISAN farmers and a number of seed companies to produce seed in the project districts. The seed companies are contracting with farmers to produce rice, maize, and lentil seed. First, KISAN met with and established MOUs with the companies. KISAN then helps introduce farmers to the seed companies who establish contracts with the farmers. KISAN is working with GATE Nepal, Khajura; International Seed Company, Kapilvastu; Nepal Agro Seed Company, Chitwan; Beej Bridhi Company, Chitwan; and Malla Seed Suppliers, Chitwan. After signing an MOU, KISAN helps manages the new relationships between the seed companies and the farmers. For example, KISAN ensures the companies make foundation seed available to farmers. Some farmers buy foundation seed and some take it on credit from the companies; the credited amount is deducted by the companies at the time of payment as per the buy-back arrangement. KISAN provides training and support to the farmers, so that they use best practices (like line sowing) to cultivate the seed crops as agreed in the contract. KISAN emphasizes the importance of quality control to farmers to offset the risks to the companies who are taking a chance working with new farmers. In cases where companies guarantee buy-back, KISAN monitors the process to ensure that the companies/co-ops buy the produced seeds at the agreed upon prices. We expect that as trust builds between the companies and farmers that this work will result long term linkages between the companies and farmers beyond the KISAN project scope and timeline.

One important aspect of seed production is ensuring quality through inspections. Seed companies follow "truthful labeling" and brand their seed, and are therefore interested in maintaining the highest quality of seeds they procure from farmers. KISAN trained seven farmers on how to conduct as seed inspection in Banke, Bardiya and Dang districts.

In addition to training farmers and the companies, KISAN mobilized two farmers groups (Chameli and Pragati) and two cooperatives (Krishik Upakar cooperative and Harikrishina cooperative) and the local DADO technical staff from the Seed Quality Control Center (SQCC) in a Banke and Bardia districts to carry seed inspections of farmers' seed production. DADO SQCC technicians worked with seed producers from the cooperatives and groups to inspect lentil seed produciton. The inspection found the plots did'nt not have any objectionable weeds or off-type plants. Farmers were advised to maintain clean fields by regularly removing weeds.

The companies agreed to accept seeds with 13% moisture content from farmers. Seed prices are based on current market rates, with additional premium (15-25%) based on the quality of seed. Farmers are storing the rice and maize seed in a sack provided by the company which is ready to be dispatched to respective companies and cooperatives. The seed will be delivered mainly to seed companies whom the farmers have made a contract agreement. Farmers also sell some seeds to cooperatives, who might sell it to other farmers and neighbors. KISAN interventions have been tied to cropping seasons in the activity areas.

Activity A.1.3 Increased the quantity and improve the quality of seed inputs

The most common sources of seed for farmers in the KISAN districts are their own crops/field or from neighbors and relatives. Apart from occasional calamities and seed exchange with other farmers, they produced their own seed by selecting part of their harvest to plant for their next crop. Hence, the quality of such seeds is questionable. Therefore the seed replacement rate of cereal (maize and rice) is below 10%. A seed sector study carried out by KISAN indicated that still about 90% of Nepal's seed requirement is coming through informal sectors. Therefore, KISAN is working in both formal and informal sectors to improve quality seed production and its availability.

During the year, district teams conducted seed production training programs in all project districts focusing on rice, maize, and lentil seed production. In Y2, early 2014, farmers have produced 243 Mt of rice seed and 35 Mt of lentil seed. Along with improved cultivation practices, district teams also supported farmers groups in crop inspection and rouging of seed crops in the field. With support from the Outcome I Manager, district teams trained seed producer groups on identification and use of quality seeds for seed production and quality control, and linked seed producer groups with private seed companies for seed marketing.

Table IV. Production of quality seed by crop (tons of seed)

Crop	Y2 Target	Y2Q1	Y2Q2	Y2Q3	Y2Q4
Rice	170	0	240	0	0
Maize	73	0	0	0	0
Lentil	10	0	0	35	0
Total	253	0	240	35	0

Activity A.1.1.3 Increased quality seed production Lentil

Limited availability of foundation/source seed continues to challenge seed production in Y2. KISAN is working closely with seed companies, DADOs, and NARC to increase production and availability of quality seed in the districts.

In Banke, Bardiya, and Dang, KISAN worked with 60 lentil seed farmers from five groups and produced 35 Mt of lentil seeds. Farmers have produced lentil seed

varieties that have high market demand in the market such as Kahjura-1, Khajura-2, and Maheshwar Bharati. Farmers accessed 1,760 kg of foundation seed from their cooperatives, DADO, and from NARC directly. KISAN has provided various trainings to the seed groups in crop inspection and removing off-types of seeds/crops (different varieties and plants that are not growing properly) to maintain seed quality. KISAN conducted 99 trainings on cereal crop and lentil seed production for 2,180 beneficiaries.

Table V. Lentil seed production summary, Y2

Group name	Address	Farmers participated	Variety	Production area (ha)	Source seed (kg)	Estimated seed production (Mt)
Krishak Upkaar Multipurpose Cooperative Ltd	Bethani, Banke	27	Khajura-2 & Maheshwar Bharati	37.22	1,489	29.78
Chameli FG	Mohammadpur, Bardiya	10	Khajura-2	1.5	60	1.2
Pragati FG	Mohammadpur, Bardiya	3	Khajura-2	0.3	12	0.24
Suryodaya Multipurpose Agri.Cooperative	Bela, Dang	7	Khajura-2 & ILL-7723	3.07	123	2.45
Shivashakti FG	Rampur, Dang	13	Khajura-2	1.87	75	1.49
Total		60		43.95	1,758	35.16

Rice

Similarly, in Banke, Bardiya, and Dang, KISAN worked with 111 rice seed farmers from four groups and produced 243 Mt of rice seeds in 96 ha of land. Of the total production, 157 Mt of seed was sold to contracted seed companies and cooperatives, and the remainder was sold through a farmer-to-farmer approach. Farmers have produced rice seed varieties that have high market demand in the market such as Radha-4, Sabitri, Sukha-3, Sawa, Makwanpur, and Bindeshwari. Farmers accessed 4,581 kg of foundation seed from their cooperatives, DADO, and NARC directly.

During Y2, KISAN has worked in two rice seasons. The initial interventions were at the beginning of Y2, and again at the end of Y2. The table below indicates the progress of rice seed production. During this season (June 2014), KISAN worked in five districts with 37 groups for rice seed production. A total of 288 farmers from 37 groups are participating in the rice seed production program on 106 ha. Farmers have accessed 5,020 kg of foundation seed from seed companies, cooperatives, DADO, and NARC. Seed companies like International Seed Company, Kapilvastu; Unique seed company, Dhangadhi; Pancha Shakti seed company, Dhangadhi; and GATE Nepal, Nepalgunj have made contract

agreements with seed groups and provided foundation seed on credit. There are other seed companies who have also entered into seed production contracts with farmers in KISAN districts. It is estimated that about 350 Mt of rice seed will be produced in the first quarter of Y3. Of the total estimated seed produced, sales of about 250 Mt of rice seed have already been agreed with seed companies/agrovets/cooperatives for contract seed production.

Table VI. Rice seed production and marketing summary (first season), Y2

Group name	District	No. of farmers	Variety	Actual seed production (Mt)	Marketed quantity of seeds (Mt)	Marketed To whom (Org)	Marketed quantity of seeds (Mt)
Krishak Upkaar Multipurpose Cooperative Ltd	Bethani Banke	27	Radha-4, Sabitri, Sukha-3	77.6	2.25	GATE Nepal	75.37
Hari Krishna Seed Producer Coop	Sorahawa Bardiya	46	Radha-4, Sawa, Makwanpur	129.4	129.4	GATE Nepal	
Nawajyoti Farmers Group	Padnaha Bardiya	19	Sawa, Radha-4, Sabitri	30.7	25.1	Budhan Multipurp ose Agri. Coop	5.6
Ichchhuk Smrithi Agriculture Cooperative	Lalmatia Dang	19	Radha-4, Bindeshwari	5.7			5.7
Total		111		243.4	156.75		86.67

Table VII. Rice seed production and marketing summary (second season), Y2

Group name	District	No. of farmers	Variety	Area (Ha)	Source seed (kg)	Estimated yield of seed (Mt)
Bahumukhi, Nawa Jyoti, Sungava, Hariyali, Namuna, Annapurna	Bardiya	41	Sabitri, Radha-4, Saba mansuli, Ramdhan	27.95	1,392	116.36
Sayapatri, Hariyali, Pipalbote, Upkar, Srijanshil, Badka, Hariyali, Bali Bikash, OmShanti Krishi	Dang	56	Subarna sub-, Sukha-3	12.41	595.4	31.03
Lokpriya, Naya Hariyali, Basanta, Subhakamana, Hariyali, Janasewa Krishi, Bikash, Samjhana	Kailali	76	Sabitri, Radha-4, Hardinath- I	22.38	1,011.75	74.01
Hariyali, Sushanti, Laliguras 3, Danfe Gharbagaicha Mahila, Sayapatri, Unnatsil Krishi Sahakari, Sanstha, Jaymahakali, Navajyoti, Singhpur, Shanti Farmer, Chatahari Krishi	Kanchanpur	81	Radha-4, Sabitri, Sukha-, Hardinath - I, Mansuli	29.15	1,302.5	86.91
Shivasakti seed, Shivasakti Samudayik Krishak	Kapilvastu	34	Sava, Ramdhan, Sabitri, Radha-4	14.33	718.8	41.67
Total		288		106.22	5,020.45	349.98

Maize

KISAN implemented the maize seed production program in 13 out of 20 districts with 43 farmers groups. A total of 879 farmers from 43 groups are participating in maize seed production on a total of 133 ha. Farmers have accessed 3,221 kg of foundation seed from their respective seed companies, cooperatives, DADOs, and NARC directly. Seed companies/cooperatives like Malla Seed Suppliers, Beej Bridhi Company, and Nepal Agro Seed Company have made contractual agreements for maize seed production with farmers in KISAN districts. The companies/cooperatives have also provided foundation seed to their growers on credit. It is estimated that about 290 Mt of maize seed will be produced from the area in early Y3 (September). The crop was planted in May and June; the plants are nearly two feet in height. Of the total estimated seed produced, about 100 Mt of maize seed has already been contracted with seed companies/agrovets/cooperatives.

KISAN teams provide consistent support to seed producer groups through trainings and monitoring. A total of 43 one-day seed production trainings have been given to seed production groups. The trainings have oriented farmers to various aspects of effective maize seed production, from cultivation to post-harvest techniques and technologies.

Table VIII. Maize	e seed production	and marketing	summary, Y	2
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District	No. of groups	No. of farmers	Variety	Area (Ha)	Source seed (kg)	Estimated yield of seed (Mt)
Dang	3	47	Rampur	8.15	202	20.59
Salyan	3	59	Manakamana	5.3	106	13.25
Rukum	8	161	Deuti	16	240	24
Pyuthan	5	101	Rampur, Manakamana - 3	22.5	453	56.38
Arghakhachi	3	66	Manakamana - 3	20.75	415	51.73
Gulmi	2	42	Deuti	3.35	67	6.915
Palpa	I	17	Manakamana - 3	2.9	77	11.6
Doti	2	37	Deuti, Rampur	2.63	52.5	10.5
Baitadi	2	42	Arun - 2, Manakamana - 3	5.6	125	11.2
Dadeldhura	2	44	Arun - 2	3.12	119.8	10.08
Jajarkot	4	79	Deuti	10.68	212.5	13.26
Surkhet	4	96	Arun - 2, Rampur	14.08	422	26.79

Table VIII. Maize seed	production	and marketing	summary,	Y 2

District	No. of groups	No. of farmers	Variety	Area (Ha)	Source seed (kg)	Estimated yield of seed (Mt)
Dailekh	4	88	Deuti, Posilo Makai - I, Rampur	17.55	719.5	33.69
Total	43	879		132.61	3,211.30	289.99

Activity A. I.2 Increased availability of inputs

The major focus of enabling farmers to access inputs has been to facilitate, establish, and maintain irrigation and water management systems. Moreover, through linkage creation input and output workshops, KISAN has engaged with agrovets to identify products and farmer requirements to increase productivity and income.

Irrigation support to farmers

The KISAN Project has supported a number of irrigation schemes for the promotion of commercial agriculture in farmer fields. A total of 19 different sites demonstrate drip irrigation, plastic ponds, and ferro-cement tanks in farmer groups. With matching funds from partners including the DADO and Western Uplands Poverty Alleviation Project (WUPAP), KISAN completed 26 irrigation schemes. The irrigation schemes completed include canal construction and repair, pipes, and life irrigation systems. In order to maintain these irrigation systems, KISAN formed user committees in each irrigation scheme. KISAN also conducted 40 repair and maintenance trainings for user groups. In total, six hectares have been irrigated by means of irrigation demonstrations.



Figure 6. Plastic ponds demonstrate a way to store water through the dry season in anticipation of climate change



Figure 7. Female farmers learn how to lay out drip irrigation demonstration

Activity A.1.3 Increased access to credit

The KISAN Project mobilizes access to credit services for beneficiary groups by facilitating linkages with a range of local financial intermediaries, including Savings and Credit cooperatives, microfinance institutions, and Financial

Institutions like banks. At the beginning of Y2, DEPRSOC carried out an initial assessment of microfinance services in Nepal to identify credit challenges and assess existing credit services and the accessibility of services. The team collected secondary data on the status and conditions of cooperatives in Nepal in the KISAN project areas. Based on this assessment, KISAN developed access to credit activities, including linkages with financial service providers. As outlined in Table XI below, in Y2, KISAN has established linkages with 46 Savings and Credit cooperatives, I I microfinance institutions, and four Financial Institutions.

Table IX. List of financial organization affiliated with KISAN beneficiaries

District	Saving and Credit Cooperative	Microfinance	Financial Institution
	Jalpadevi Saving and Credit Cooperative	Chimek Microfinance Development Bank	
Achham	Jayagadh Saving and Credit Cooperative	Laxmi Microfinance Development Bank	
	Pragatisil Saving and Credit Cooperative	Swabalamban Microfinance Development Bank	
Baitadi	Shikhar Seed Promotion Cooperative Ltd.		
Banke	Milijuli Swablamban Krishak Bahuudeshiya Sahakari Sanstha Limited		
Bardiya		UNYC Nepal	Swablamban Development Bank
Dadeldhura	Shree Masta Multipurpose Farmer Co operative		Nirdhan Utthan Bank Ltd
Buderdirara	Shree Nawa Jagaran Saving & Credit Cooperative Ltd.		
Dailekh	Janasebak Bachat tatha Rin Sahakari Sanstha Limited		

Table IX. List of financial organization affiliated with KISAN beneficiaries

District	Saving and Credit Cooperative	Microfinance	Financial Institution
	Kankretada Bahuudeshiya Sahakari Sanstha Limited		
	Bali Bikas Krisi Sahakari Sastha ltd.	Gramin Mahila Uthan Kendra	
	Gadhawa Fraket Krisak Sahakari Sastha	Nepal Mahila Samudaik Sewa Kendra	
	Ichhuk smirti Krisi Sahakari Sastha		
Dana	Milijuli Bahuudeshiya Sahakari Sanstha Limited		
Dang	Om Nama Pandabeshwar Mahadev Saving and Credit C cooperative Limited		
	Om Nama Pandeswor mahadev Bachat tatha Rin sahakari sanstha Ltd		
	Rajdhani Bahuudhesiye Sahakari Sastha		
	Suryedawya Bahuuddhesye Sahakarri Sastha		
	Janakalryan Multipurpose Co-operative LTD		Nirdhan Utthan Bank LTD
Doti	Kaphali saving and credit Co-operative organization LTD		
Dou	Khaptad Mahila Multipurpose Co- operative Limited		
	Latakaphali saving and credit Co- operative organization LTD		

Table IX. List of financial organization affiliated with KISAN beneficiaries

District	Saving and Credit Cooperative	Microfinance	Financial Institution
	Pargati Mahila Multipurpose Co- operative LTD		
	Puspamala Saving and Credit Co- operative LTD		
	Sarswati Multi-purpose Co-operative LTD		
	Upakar Samridhi Multipurpose Co- operative organization LTD		
	Warpata Saving and Credit Co- operative Limited		
Gulmi	Nawaratna Agriculture Cooperative Limited		
Guiiii	Nawdurga Agriculture Cooperative Limited		
Kailali	Kisan Bahuudesya Sahakari Sanstha Ltd.	UNYC Nepal Branch Office	
	Bhrikuti Women Multipurpose Cooperative Ltd.	Chhimek Laghubitta Bikas Bank Limited	
Kapilbastu	Chetra Devi saving and credit cooperative limited		
	Sahaj Saving and Credit Cooperative Ltd		
Pyuthan	Bageswari Mahila Bachat Tatha Rin Sahakai Sastha Ltd.		
i judian	Shree Devisthan Bachat Tatha Rin Sahakari Sastha Ltd.		

Table IX. List of financial organization affiliated with KISAN beneficiaries

District	Saving and Credit Cooperative	Microfinance	Financial Institution
	Trisakti Mahila Bachat Tatha Rin Sahakari Sastha		
Rolpa	Gadhi Lek Bachat tha Rin Sahakari Sastha	Swabalamban Laghu Bitiya Bikash Bank Rolpa branch	
Rukum	Garibi Niwaran Namuna Bachat Tatha Rin Sakahari Sanstha		
	Laliguransh Krishi Sahakari Santha LTD		
	Barala Agricultural Multi-puspose co- operative ltd	Garamin mahilaUthan kendra	Madhya Paschim Anchal Gramin Bikas Bank Ltd.
Calvan	Jan sebi krisi sahakare sastha limited	Swabalamban Laghubitiya Bikash Bank Salyan	
Salyan	Kalika Kirsi Sahakari Limiteda		
	Pargati Tatha Bachat Sahakari Laghubit Karekarm		
	Shubha Laxmi Bachat Tatha Rin Sahkare Sastha Limited		
	Baa Aamaa Sakriya Krishi Sahakari Sanstha Limited		
Surkhet	Gangamala Swabalamban Bikas Bachat tatha Rin Sahakari Sanstha Limited		
	Sana Kisan Krishi Sahakari Sanstha Limited		

Orientation on savings and credit to farmer groups

KISAN has provided 33,245 farmers from 1,656 groups one-hour orientations on savings and credit during the one-day trainings at the time of group formation. The beneficiaries have started group saving; group funds are mostly used for agricultural loans. The orientation has helped group members to maintain group savings and credit in a more systematic manner.

In order to facilitate and manage the group savings and credit activities, the project has developed simplified savings and credit ledgers, minute books, and pass-books. These have been distributed to 115 KISAN groups conducting group savings in Y2.

Table X. Savings and Credit Groups

	No of	No of				
District	group	beneficiaries				
Bheri Cluster	r					
Banke	251	205				
Bardiya	249	5,349				
Surkhet	102	1,828				
Dailekh	83	1,828				
Jajarkot	45	910				
Far-West Clu	uster					
Doti	71	402				
Dadeldhura	15	315				
Achham	20	400				
Kailali	72	1,516				
Kanchanpur	89	1,829				
Baitadi	18	400				
West Cluster	West Cluster					
Palpa	17	340				
Gulmi	30	600				

Arghakhachi	30	600
Kapilvastu	78	1,540
Rapti Cluster	•	
Dang	261	5,467
Salyan	46	909
Rukum	44	907
Rolpa	45	1,001
Pyuthan	90	1,899
Total	1,656	33,245

Interaction meeting with existing cooperatives

KISAN conducted 45 interaction meetings with cooperatives in project districts to identify areas of overlap between cooperatives and KISAN beneficiaries, and to assess possibilities of extending cooperative coverage to include KISAN groups. The meetings focused on cooperatives' size of business, savings and loan products, membership policy, resource collection, mobilization, and possible financial services and needs within KISAN beneficiaries such as tailored loan products and mechanisms. This activity has helped KISAN identify 40 cooperatives which can potentially benefit from different aspects of organizational development and strengthening activities.

Needs-based training for cooperatives

Based on the recommendation of interaction meetings with cooperatives, KISAN conducted two needs-based cooperative business plan trainings for 42 executive members from 40 cooperatives in the KISAN districts. Training was designed to develop the organizational capacity of cooperatives to enable them to prepare business plans and plan their activities in a more organized way. The business plan training included various aspects of business planning such as: inclusiveness, catchment area, product development, stakeholders and competitor analysis, human resource analysis, infrastructure analysis, and financial status including a Protection, Effective financial Structure, Asset quality, Rates of return and costs, Liquidity, and Signs of Growth (PEARLS) analysis.

Based on the analysis participants learned to prepare three to five-year organizational business plans. Following the training, the cooperatives are expected to prepare business plans to extend their area and services into KISAN VDCs and beneficiaries. Cooperative coordinators and an external resource person from Gangamala cooperative, Surkhet facilitated the training.

In-country exposure visit

KISAN organized an exposure visit to Gangamala Savings and Credit Cooperative, Chhinchu, Surkhet for 20 cooperative members from the Bheri and Rapti clusters in Q4Y2. The objectives of the visit were to:

- Demonstrate the new practices at other cooperatives; and
- Highlight successes and best practices of the visited cooperative.

The participants have observed the overall organization's status including human resources, infrastructure, financial system, and products and services that they provide to beneficiaries. They have also shared each other's experience regarding microfinance (MF) services.

Through the visit, the groups have obtained knowledge on meetings and coordination, membership promotion, delinquency management, and dealing and linking with other financial institutions, particularly in the rural districts. The visit has boosted participant confidence and motivation to expand their services and business.

Interaction meeting with MFDB/FINGO

Twenty-four meetings were organized in different microfinance development banks (MFDBs)/financial intermediary non-governmental organizations (FINGOs) in the KISAN working districts. Topics included savings and loan products, membership policy, resource collection, and social mobilization. The objective of the meeting was to identify the overlapping VDCs/members of KISAN and possibilities for extension of MF services to KISAN VDCs/groups.

As a result of this meeting, KISAN and MFDBs/FINGOs have agreed to work together and have identified 24 potential MFDBs/FINGOs for possible collaboration with KISAN. FINGOs have requested a business plan training to help their organizations transition from FINGOs to MFDB as per Nepal Rastra Bank directions.

Needs-based training for MFDBs/FINGOs

In Y2, KISAN has conducted a needs-based training for 17 executive members of eight FINGOs from the main objective of the training was to develop the Rudra Dahal of Microfinance Association of Nepal training helped participants prepare organizational

Interaction and linkage building meeting for vendor visit

KISAN conducted 20 meetings with agriculture input



Figure 8. Participants learn how to develop business plans at the needs-based training for MFDBs/FINGOs

on FINGO business plan preparation Bheri, Rapti, and West clusters. The organizational capacity of FINGOs; Mr. (MIFAN) facilitated the event. The business plans.

vendor-based financing and

suppliers (vendors) in the 20 project

districts. As a result of these interactions the input suppliers have provided 112 beneficiaries vendor-based input services, including seed and

fertilizer sales on credit. The vendors have provided short-term credit services for procurement of seed, fertilizers, and plastics for nursery raising, etc.

In Y3, KISAN will roll out a grants program to encourage vendors to invest in small machinery. This activity will also incorporate vendor financing modalities.

Enhanced access to finance in KISAN areas

Following the series of activities described, KISAN beneficiaries have started group-level savings and credit. A total of 2,283 beneficiaries are now affiliated with cooperatives and bank/FINGOs. NPR 21,962,535.00 has been disbursed for the purpose of agricultural loans.

District-specific details are given below.

Table XI. Beneficiaries engaged in cooperatives, FINGOs, etc. by district

District	No. of beneficiaries engaged in Coops/MFDBs/FINGOs	Loan disbursements
Banke	286	850,000
Bardiya	175	3,137,200
Surkhet	150	10,323,454
Dailekh	300	728,000
Jajarkot	0	0
Total Bheri	911	15,038,654
Doti	45	971800
Dadeldhura	56	110000
Achham	24	383000
Kailali	118	876000
Kanchanpur	165	143000
Baitadi	33	150000
Total Far-West	441	2,633,800

Table XI. Beneficiaries engaged in cooperatives, FINGOs, etc. by district

District	No. of beneficiaries engaged in Coops/MFDBs/FINGOs	Loan disbursements
Palpa	14	131,000
Gulmi	13	85,000
Arghakhachi	15	15,000
Kapilvastu	10	196,000
Total West	52	427,000
Dang	263	283,000
Salyan	247	1,154,525
Rukum	0	0
Rolpa	157	2,351,556
Pyuthan	212	74,000
Total Rapti	879	3,863,081
Total	2,283	21,962,535

Lessons learned are presented in the table below.

Table XII. Outcome I: Lesson Learned

Entity	Lessons learned
Groups	 Groups are collecting savings and are operating as informal MF groups as they provide group members with small scale loans in the agriculture sector using group savings
Savings and credit cooperatives	 Cooperatives in KISAN areas vary in levels of experience, so requirements of cooperatives differ. KISAN's approach will therefore be to provide needs-based support for mature cooperatives that can render services to KISAN beneficiaries Small cooperatives s are encouraged to maintain a basic standard of operation such

Table XII. Out	tcome I: Lesson Learned
Entity	Lessons learned
	as with consistent or written policies and products, expanded services with business planning, institutional development, and linkage building
	 KISAN has provided technical support with business plan training for transitional MFDBs, including the ones mentioned in the table above.
FINGOs/ MFDBs	 They are committed to expanding their services in KISAN areas; stronger follow- up is required in Y3to enable such expansion of services to happen.
	 Nirdhan has been identified as an FINGO/MFDB with potential to provide access to credit services in the KISAN zone of influence. It is operational in 14 districts including Banke, Bardiya, Surkhet, Dailekh, Jajarkot, Dang, Rukum, Salyan, and Pyuthan.
Vendors	 Tractors, tools, and equipment for vegetables and rice seed are the items in which farmers invest. KISAN has since decided to work with vendors and farmers to make these inputs more accessible in KISAN areas through the Grants program.
vendors	 Due diligence measures to assess the repayment capacity and credit-worthiness of potential borrowers need to be finalized and implemented by financial intermediaries before vendor financing can be rolled out to KISAN beneficiaries.
Enabling environment for credit disbursement	 The good relations with FINGOs and MFDBs developed this year are expected to produce results next year. Some MFDB branches in KISAN areas lack IT systems and they are not able to efficiently support our beneficiaries; KISAN is considering a grant activity to provide hardware and software to those financial intermediaries, including emerging cooperatives, as needed in Y3.

2. OUTCOME 2, SUB-IR 1.2: IMPROVED CAPACITY OF AGRICULTURE EXTENSION WORKERS, SERVICE PROVIDERS, AND FARMERS

Under Outcome 2, KISAN trains change agents and farmers in all 20 districts. Change agents include GON extension workers, service providers (agrovets, local service providers, and local companies), commercial agribusiness, and lead farmers. The training materials for various change agents are being finalized and are continually updated.

In Y2, KISAN conducted various training programs on different topics for farmers, local service providers, MPC members, and change agents. The major trainings provided to farmers are one-day trainings on nursery management, mobile training, and compost making training in farmers groups. These trainings were facilitated by DCs, Program Officers (PO), and Agriculture Technicians (ATs) in the field. Besides the theoretical knowledge, some practical skills were also provided during the training. Where ever possible, DADO staff was also engaged to carry out the seed production and other one-day trainings.

Table XIII. Outcome 2: Improved capacity of agriculture extension workers, service providers, and farmers

Q2	Performance Indicator	Target Y2	Achievement Y2	Achievement (Y2Q4)	Target LOP	Achievement To Date
2.1	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training.	32,900	32,976	12,688	200,000	33,036
2.2	Number of agriculture extension workers, service providers and farmers who successfully complete exam at end of training.	300	271	105	960	271

Similarly, mobile trainings were provided for farmer groups to address the immediate problems encountered in the field. These practical trainings are carried out by ATs or LSPs in the field to solve urgent issues in farmers' fields.

Table XVI shows the number of agriculture extension workers, service providers, and farmers trained in Y2 as compared to life of project (LOP) targets. In Y2, KISAN trained 32,976 farmers on short-term agricultural sector productivity or food security, which brings the LOP

total to 33,036 farmers trained. Of Y2 target of 300 change agents to be trained, 274 were trained; of these trained LSPs, 271 successfully completed examinations at the end of the training. These trained change agents will support all Outcomes of the project.

Table XIV. Number of individuals who have received USG supported short-term agricultural sector productivity or food security training

District Number of farmers trained (Y2Q4)	Male	Female	Total farmers trained cumulative	Male	Female
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Table XIV. Number of individuals who have received USG supported short-term agricultural sector productivity or food security training

District	Number of farmers trained (Y2Q4)	Male	Female	Total farmers trained cumulative	Male	Female
Achham	445	67	378	445	67	378
Arghakhanchi	1,620	382	1,238	1,620	382	1,238
Baitadi	474	156	318	500	165	335
Banke	10,404	3,267	7,137	17,819	5,974	11,845
Bardiya	12613	2387	10226	23,777	4236	19,541
Dadeldhura	483	78	405	483	78	405
Dailekh	8097	1677	6420	12492	2553	9939
Dang	18020	4999	13021	25301	6960	18341
Doti	1001	176	825	1029	181	848
Gulmi	1,434	435	999	1,434	435	999
Jajarkot	3,157	1090	2,067	5,081	1705	3,376
Kailali	2,544	799	1,745	2,544	799	1,745
Kanchanpur	2,887	1,072	1,815	2,909	1,076	1,833
Kapilbastu	1671	764	907	1754	811	943
Palpa	1,130	308	822	1,130	308	822
Pyuthan	4415	854	3561	7720	1465	6255
Rolpa	2778	840	1938	4193	1212	2981
Rukum	2993	539	2454	4835	924	3911
Salyan	3,618	1,129	2,489	6,385	2,041	4,344
Surkhet	6,856	1278	5,578	9,038	1628	7,410
Total	86,640	22,297	64,343	130,489	33,000	97,489

Some Y3 activities have already begun. In order to meet Y3 targets in the crop categories, KISAN has begun some Y3 trainings according to crop cycles and seasons, and in Y2 has trained more than 1,100 farmers of Y3 target of 49,700 farmers.

Activity A.2.1 Trained change agents

KISAN trains Junior Technician/Junior Technical Assistants (JT/JTA), LSPs, commercial agribusinesses, agrovets, and local companies as change agents in beneficiary communities. Special attention is given to innovative farmers of each group; field demonstrations during the one-day practical trainings are carried out in these farmers' fields. Other demonstrations will continue to be conducted in these plots. KISAN will also continue to take some of them on exposure visits and various meetings/workshops to help establish linkages. Small agrovets will also be supported to obtain certification and licensing.

Developed curriculum and materials for TOT for Local Service Providers to use in their trainings

Continuing the efforts from the previous quarter, staff have finalized technical curricula for local service providers and designed TOTs. The trainings will build change agent capacities in varied technical activities and orient them to other related issues such as business planning and management, gender sensitivity, environmental impact, how to train others, and communications skills.

Identified change agents and conduct training sessions

The KISAN team is working to identify individuals who can serve as potential change agents in the KISAN production areas. In Y2, 274 LSPs have been identified and trained on improved agriculture production, business planning, gender sensitivity, environmental impact, etc. This is 91% of the Y2 target of 300 change agents. KISAN was not able to achieve 100% of the target largely because activities in the West and Far-West began only in February 2014. Out of the 274 LSPs trained, 271 successfully completed exams at the end of the training. From the 271 LSPs, 146 LSPs have also received training on group savings and credit and vendor-based financing. The identification and training of change agents will continue in Y3. Besides the trainings, several interaction meetings were held with agrovets, local companies, MFDBs/FINGOs, coops, MPCs, etc. Table XVII shows the LSPs trained during the quarter and in Y2; Table XVII shows the numbers of LSPs that completed the exam following the trainings.

Table XV. Number of agriculture extension workers, service providers, and farmers who successfully complete exam at end of training

District Number trained (of farmers (2Q4) Male	Female	Total farmers trained cumulative	Male	Female
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Table XV. Number of agriculture extension workers, service providers, and farmers who successfully complete exam at end of training

District	Number of farmers trained (Y2Q4)	Male	Female	Total farmers trained cumulative	Male	Female
Achham	10	4	6	10	4	6
Arghakhanchi	5	2	3	5	2	3
Baitadi	10	6	4	10	6	4
Banke	0	0	0	26	17	9
Bardiya	0	0	0	29	10	19
Dadeldhura	9	4	5	9	4	5
Dailekh	0	0	0	15	П	4
Dang	0	0	0	27	19	8
Doti	7	5	2	7	5	2
Gulmi	5	2	3	5	2	3
Jajarkot	0	0	0	10	7	3
Kailali	21	13	8	21	13	8
Kanchanpur	21	12	9	21	12	9
Kapilbastu	12	П	I	12	П	I
Palpa	5	3	2	5	3	2
Pyuthan	0	0	0	13	7	6
Rolpa	0	0	0	10	8	2
Rukum	0	0	0	10	3	7
Salyan	0	0	0	13	7	6
Surkhet	0	0	0	13	7	6
Total	105	62	43	271	158	113

Activity A.2.2 Organized farmers into groups and cooperatives

KISAN staff began forming farmers groups in October 2013 and will continue doing so through the coming quarters. In Y2, KISAN formed 401 farmers group; the cumulative number of groups formed by the end of Y2 is 1,572. Staff began recording field records in WIKISAN starting in February 2014 onwards. This has enabled accurate computation of groups ensuring that there is no double-counting.

In Y2 KISAN has formed 1,572 groups and trained 32,976 farmers from 1,557 groups; 397 or about 25% of these groups are currently registered in various institutions as shown in Table XVIII (see Annex I for a map of group formation by district and VDC). Of those 32,976 farmers of the Y2 target representing 1,557 groups, 11%, 65%, and 8% are dalit, janajati/ethnic, and madhesi, respectively. Also, 73% of beneficiaries are female and 22% of beneficiary households (HHs) are female-headed.

Table XVI. Number of Producer/Farmer Groups formed and trained in Y2

District	No. of groups formed (Q4Y2)	Total cumulative no. of groups	Total cumulative no. of groups trained
Achham	19	19	19
Arghakhanchi	30	30	30
Baitadi	18	18	18
Banke	0	237	237
Bardiya	0	248	248
Dadeldhura	15	15	15
Dailekh	0	83	83
Dang	0	261	261
Doti	17	17	17
Gulmi	30	30	29
Jajarkot	0	45	45
Kailali	72	72	72
Kanchanpur	90	90	90
Kapilbastu	91	91	77

Palpa	17	17	17
Pyuthan	0	90	90
Rolpa	0	45	45
Rukum	0	44	44
Salyan	0	49	49
Surkhet	0	71	71
Total	399	1,572	1,557

Table XVII. Number of groups registered

District	District Agriculture Development Office	Department of Cooperative Office	Small Cottage Industries	
Achham	10	0	0	
Arghakhanchi	28	0	0	
Baitadi	1	0	0	
Banke	5	5	I	
Bardiya	134	0	0	
Dadeldhura	12	0	0	
Dailekh	7	0	0	
Dang	5	0	2	
Doti	15	0	0	
Gulmi	17	0	0	
Jajarkot	5	0	0	
Kailali	I	I	0	
Kanchanpur	38	0	0	
Kapilbastu	9	0	0	

Table XVII. Number of groups registered

District	District Agriculture Development Office	Department of Cooperative Office	Small Cottage Industries
Palpa	17	0	0
Pyuthan	0	0	0
Rolpa	8	0	0
Rukum	0	0	0
Salyan	7	0	0
Surkhet	67	2	0
Total	386	8	3

Table XVIII. Number of groups formed, Y3

District	No. of groups formed	Total farmers	Male	Female
Achham	9	171	29	142
Arghakhanchi	19	361	76	285
Banke	20	380	129	251
Bardiya	48	912	157	755
Dadeldhura	13	247	54	193
Dang	I	19	5	14

Gulmi	10	190	55	135
Kanchanpur	49	931	346	585
Palpa	25	475	135	340
Pyuthan	16	304	55	249
Rukum	7	133	26	107
Surkhet	32	608	115	493
Total	249	4,731	1,260	3,471

In the final quarter of Y2, KISAN also formed 249 groups from the Y3 target, representing about 4,731 of the total 49,700 Y3 beneficiaries. As stated earlier, this measure was necessary in order to form groups in a timely manner and implement targeted trainings in Y3. This will enable to train as many farmers according to seasons and cropping patterns, particularly to train farmers on rice production in

the terai and vegetable production in the hills. Out of the 249 groups formed, 54 groups have also received trainings; 797 Y3 beneficiaries are already updated in WIKISAN.

Activity A.2.3 Trained farmers on improved production and post-harvest on rice, maize, lentil, and vegetables

In order to improve accessibility and availability of nutritious foods, KISAN trains farmers to grow vegetables that have market demand to increase their income. KISAN promotes improved varieties of rice, maize, and lentils to increase food security. The project is also introducing new (improved) technologies and techniques such as growing vegetables in raised beds; sowing seeds in lines in nursery beds; timely and proper land preparation; and plastic houses/tunnels to cultivate off-season vegetables. KISAN has also started trainings on both seed and crop production of rice, maize, and lentils.



Figure 9. Female farmers learned improved vegetable production techniques like proper land preparation and post-harvest practices that minimize loss and maintain nutrition, applied here to bitter gourd crop

A series of six trainings per year over two crop cycles has been planned which includes a training on access to finance in either the first or second one-day technical trainings and subsequent follow-ups in remaining technical trainings. During Y2, staff conducted trainings in all 20 project districts. KISAN has conducted 6,067 trainings (multiple) on a range of topics for 1,557 groups in Y2. Trainings provided to farmers vary based on the agro-ecosystem:

- 1,588 one-day Nursery Management and Crop Production Management trainings, access to finance etc.;
- 937 one-day Crop Production Management and Marketing trainings, access to finance, etc.; and

• 1,688 mobile Crop Plantation/Plant Protection, Post-harvest and Marketing trainings, etc.

Through June 30, 2014, a total of 32,976 farmers have been trained. The number of individuals in each project district who received training (unique count) is presented in Table XXI.

Table XIX. Number of individuals who have received USG supported short-term agricultural sector productivity or food security training

District	Number of farmers trained (Y2Q4)	Male	Female	Total farmers trained cumulative	Male	Female
Achham	398	67	331	398	67	331
Arghakhanchi	665	140	525	665	140	525
Baitadi	399	132	267	399	132	267
Banke	5,120	1,704	3,416	5,204	1,760	3,444
Bardiya	5,580	964	4,616	5,622	970	4,652
Dadeldhura	326	71	255	326	71	255
Dailekh	1,767	359	1,408	1,767	359	1,408
Dang	5,385	1,413	3,972	5,422	1,431	3,991
Doti	407	66	341	407	66	341
Gulmi	645	188	457	645	188	457
Jajarkot	882	319	563	901	327	574
Kailali	1,515	450	1,065	1,515	450	1,065
Kanchanpur	1,703	632	1,071	1,703	632	1,071
Kapilbastu	1,537	704	833	1,537	704	833
Palpa	391	Ш	280	391	Ш	280
Pyuthan	1,706	319	1,387	1,779	320	1,459
Rolpa	899	274	625	947	293	654
Rukum	881	174	707	899	174	725

Table XIX. Number of individuals who have received USG supported short-term agricultural sector productivity or food security training

District	Number of farmers trained (Y2Q4)	Male	Female	Total farmers trained cumulative	Male	Female
Salyan	953	305	648	953	305	648
Surkhet	1,493	282	1,211	1,496	284	1,212
Total	32,652	8,674	23,978	32,976	8,784	24,192

In Y2, KISAN conducted a total of 6,067 trainings: 5,679 in vegetable production and 289 on cereal crops (rice and maize) and lentil. Of the cereal crops and lentil, KISAN has also trained farmers on how to produce lentil, maize, and rice seed and a total of 99 trainings were also conducted for cereal crops and lentil seed production. Other trainings include training for LSPs (12); and training on marketing (46), micro

irrigation (21), and access to finance (20).

Some of the trainings were conducted at the demonstration sites (see Outcome 3). KISAN staff

Figure 10. Plastic trays for sapliling production was one of the new technologies farmers learned in KISAN trainings

USG

(multiple count).

In the first quarter of Y3, staff will continue a for farmers. About 2,500 one-day trainings and conducted. KISAN will identify and train at least extension workers (JT/JTA), LSPs, commercial



used these sites to train farmers on a range of techniques such as the benefits of rhizobium inoculation; vegetable production; plastic house with drip irrigation for off-season vegetable promotion; lentil seed and crop production; improved vegetable cultivation packages, including

Figure 11. Trainings provided information on environmentallyfriendly and sustainable methods to improve yields, including coco peat as a potential soil additive

practices in cauliflower, tomato, and onion production; and nursery establishment. Table XX shows the number of individuals who have received supported short-term agricultural sector productivity or food security training

variety of one-day and mobile trainings about 2,800 mobile trainings will be 180 change agents including GON agribusinesses, local companies, agrovets,

etc. KISAN will also train at least 100 MPC members, 20 coop members, and 20 MFDB/FINGO members. See text Box 1 for lessons learned from Outcome 2 activities in Y2.

I. Outcome 2: Lessons Learned

- Mobile field-based practical trainings are very effective in successfully teaching farmers how to cultivate crops with improved techniques.
- In spite of challenges such as geographically-scattered locations and high targets in some clusters, as a result of the trainings farmers are gradually switching from traditional agriculture production to new technologies in nursery management, crop production, and plant protection, and more farmers groups are now linked with savings groups.
- Due to the late implementation of project activities in the field, it has been difficult to match the training topics with crop cycles according to the DIP allocated months.
- With the modification finalized, KISAN has hired additional ATs, which has increased KISAN
 presence and optimized performance at the field level.
- Another issue that the project is working to address is the limited agrovet services and lack of timely availability of quality inputs. Leveraging resources has been noted to be effective in reinforcing the effectiveness of the trainings, and also helps respond to the issues noted above.
- Focus on collaborative seed distribution, and joint monitoring and activity planning in Y3 is expected to strengthen partnerships further.

3. OUTCOME 3, SUB-IR 1.3:
IMPROVED AND SUSTAINABLE
AGRICULTURE PRODUCTION
AND POST-HARVEST
TECHNOLOGIES AND
PRACTICES ADOPTED AT THE
FARM LEVEL

To improve productivity, and better prepare farmers for climate change, KISAN is introducing new technologies through the trainings described in Outcome 2. For example, KISAN may improve water management through innovative capture technologies and efficient water usage methodologies such

as multi-purpose ponds or micro-dams that incorporate irrigation and off-season crop production. Additionally, KISAN is showing farmers how to improve their soil via conservation tillage practices, composting to increase soil organic matter, and improved irrigation practices. Overall, farmers lack access to improved technologies and cultivation practices of commercially viable crops. Farmers have also displayed limited awareness about the potential commercial value of certain crops such as vegetables.

Activity A.3.1 Designed technical and field-based interventions to improve production

Over the project lifetime, KISAN will carry out a range of trainings to enhance beneficiary capacities and improve agriculture productivity in KISAN working areas. Trainings cover a range of improved techniques and technologies including land improvement/preparation practices; management practices; cultural practices; harvest and post-harvest practices; nursery management; and crop genetics. In Y2, KISAN trainings

(including 535 technology-specific demonstrations) have oriented beneficiaries to numerous new techniques and technologies, as outlined in Table XXII.

Table XX. Technical and Field-based Interventions to Improve Production				
Technology Category	KISAN Improved Technology			
Land	Soil solarization			
improvement/preparation	Terrace improvement			
practices	Type of soil for suitability of different crops			
Crop genetics	Adopting improved and quality seed variety			
Crop genetics	Use of draught tolerance seed variety			
	Raised/low bed nursery			
Nursery management	Polypot/polybag, tray nursery			
rvursery management	High bed nursery (tand)			
	Mulching			
	Use of plastic house/tunnel			
	Use of MIT (drip/sprinkler/MUS/Treadle pump/plastic pond)			
	Agronomy management (complementary mix, inter-cropping, mixed			
Management practices	cropping, relay cropping, crop rotation)			
r lanagement practices	Off-season cultivation			
	Use of nutrients and lime			
	Line sowing, adequate spacing (both plant-to-plant and row-to-row)			
	Direct seeding in case of rice, maize, and lentil			
	Adequate use of manure			
Cultural practices	Raised bed farming			
	Timely sowing			

Table XX. Technical and F	Table XX. Technical and Field-based Interventions to Improve Production					
Technology Category	KISAN Improved Technology					
	Timely irrigation					
	Timely weeding					
	Staking, mulching					
	Use of lure and traps					
	Use of bio-fertilizer					
	Balance use of fertilizer					
	Adoption of IPM practices					
	Judicial use of pesticides; use of Class III and IV pesticides					
	Use of jholmol (liquid manure)					
	Use of hormones for female flower induction (e.g. miraculan)					
	Proper handling of sprayer					
Harvest and post-harvest	Harvesting time (based on crop type) and time of harvest					

Activity A.3.2 Identified improved post-harvest processes

To help farmers understand the importance of proper post-harvest handling, KISAN staff carried out 35 demonstrations of simple storage technologies that can prevent crop loss of cereals and legumes using Superbags, etc. Such demonstrations are providing farmers vital information on effective and technically sound post-harvest management. A total of ten storage technology demonstrations for cereals and legumes using super grain poly bags were conducted.

Additionally, KISAN hired post-harvest expert Dr. Kirsten Hell to assess the existing post-harvest management situation based on observed losses, identify causes of loss and gaps in the process, and recommend modifications in the process to remedy the situation. The major finding of the assessment was that there is a significant crop loss at the farm-household level due to inefficient post-harvest handling. As an extention of this activity, the KISAN team is working to identify specific technologies and practices, such as the Super Bags for storage that reduce post-harvest losses of seed, grains, and vegetables. Dr. Hell traveled to Nepal from November 25, 2013 to December 16, 2013 and assessed post-

harvest losses in maize, lentils, rice, and vegetables. Dr. Hell travelled to farmers' houses, collection centers, and markets in Western and Mid-Western districts in the course of her assignment.

Dr. Hell interacted with key government institutions working in the agriculture value chain; the Plant Quarantine Officer at the Nepal/India border; Agriculture and Forestry University; farmers; collectors; traders; and millers from six wholesale markets in Central, Western, and Mid-Western districts. She also met with the Department of Food Technology and Quality Control (DFTQC) and the CIMMYT/HMRP to understand their research concerning post-harvest quality and quality control. Dr. Hell's findings are as follows:

- Infestation in rice starts in the field or on the threshing ground as farmers leave the paddy piled up in the threshing ground for seven days to two months.
- The metal bins which are thought to be the best option also have risk of condensation due to climatic changes so it needs to be tested in varying climatic conditions.
- Farmers' estimation of losses is around 10% in rice which can reach 10-20% in actual losses; and 15%-20% in maize which can reach 40-50% in actual losses. Farmers also estimate a 10% loss in lentil production.
- There are low yields in maize 200 kg/ropani (2.5 t/ha) with improved varieties and I 00kg/ropani with local varieties. According to the farmers, hybrid varieties seem to be more susceptible to pests.
- Lentil has 30% price differential after six months storage, so farmers prefer to store. However, storage in hermetic bags, plastic containers, and drums also leads to caking in lentils. Since there is a high percentage of impurity, there is a need to establish sorting practices at the farm level to capture price differential.
- Lack of grading, packaging, mishandling during transportation, and improper storage and stacking leads to a higher incidence of degradation in the quality of vegetables.

The recommendations have been incorporated in training materials, followed up in other assessments and studies, and used in trainings/orientation conducted. Issues are also being considered when developing proposals for VDCs and other potential funders.

Activity A.3.3 Established demonstration plots

Technology demonstrations

Farmers are unaware of the new cultivation lentils, rice, and maize. In Y2, KISAN has improved technology through its trainings farmers' production. A total of 535 completed in farmer fields: 28 plastic houses vegetable promotion; 140 demonstrations of production and vegetable production; 308 mol) technology; 35 demonstrations of legumes (Super-bag etc); and 24 are presented in Table XXIII; see text Box 2



Figure 12. One of the technologies demonstrated and adopted by farmrs is the ventilated plastic house, particularly useful for off-season vegetable production when farmers can earn higher prices

practices and the new varieties of promoted new methods and and demonstration events to increase demonstration events have been with drip irrigation for off-season rice, maize, lentil crop/seed demonstrations of bio-pesticide (jholstorage technology of cereals and demonstrations of irrigation. Details for lessons learned.

Table XXI. Demonstration Plots by District

District	Demonstrati on of plastic house with drip irrigation for off-season vegetable promotion	Demonstratio n rice, maize, lentil crop/seed production and vegetable production	Demonstra tion of bio- pesticide (jhol-mol) technology	Demonstration of storage technology of cereals and legumes (Super- bag, etc.)	Demonstration of irrigation
Achham	2	6	2	0	0
Arghakhanchi	2	8	10	0	0
Baitadi	0	I	I	0	I
Banke	0	2	16	0	4
Bardiya	0	3	37	10	4
Dadeldhura	2	0	4	0	0
Dailekh	2	17	28	0	6

Table XXI. Demonstration Plots by District						
District	Demonstrati on of plastic house with drip irrigation for off-season vegetable promotion	Demonstratio n rice, maize, lentil crop/seed production and vegetable production	Demonstra tion of bio- pesticide (jhol-mol) technology	Demonstration of storage technology of cereals and legumes (Super- bag, etc.)	Demonstration of irrigation	
Dang	8	5	9	9	2	
Doti	0	3	7	0	0	
Gulmi	2	6	3	I	0	
Jajarkot	0	8	25	0	0	
Kailali	3	6	13	0	0	
Kanchanpur	1	0	7	0	0	
Kapilbastu	0	10	0	0	0	
Palpa	0	6	5	I	0	
Pyuthan	1	12	31	0	2	
Rolpa	1	12	20	0	2	
Rukum	0	22	9	4	0	
Salyan	0	0	46	0	0	
Surkhet	4	13	35	10	3	
Total	28	140	308	35	24	

Activity A.3.3.1 Plastic house with drip irrigation for off-season vegetable promotion

Growing vegetables in Nepal is mostly seasonal when using traditional methods. During vegetable seasons, there is a surplus of produce so farmers get minimal prices; more vegetables come in from India, exacerbating the situation. Conversely, during off-seasons consumer pay much more for the limited produce. To address this, KISAN has introduced plastic houses with drip irrigation to grow off-season vegetables. Off-

season vegetables improve the household diet and increase household income. In the absence of storage infrastructure and vegetable processing industries, off-season vegetable farming is the only viable option that can add value to the farmers' produce. Cucumbers, tomato, and bitter

2. Lessons Learned

- The demonstration events have motivated farmers to adopt and create demand for the plastic house and drip technology.
- Demonstrations have helped farmers understand importance of the technologies to increase production, and control pests, insects, and diseases.
- Production was three to five times more than cultivation in open fields.
- Fewer pests and incidents of disease as compared to open field production.
- This is still a costly investment for the first crop cycle, so KISAN is working with other stakeholders to leverage the cost of the plastic houses.
- There is shortage of labor so labor costs are high.

gourd are grown in tunnels covered in plastic creating a greenhouse effect. This reduces temperature fluctuations, and protects the crops from weather damage. This relatively simple practice can produce significant boosts in income due to the timing of the harvest. This technology also helps water efficiency in farming since the drip system supplies water directly to the root of plant base.

In Y2, KISAN has conducted a total of 28 plastic house with drip irrigation demonstrations for off-season vegetable production. After seeing the impacts, farmers themselves invested in an additional 62 plastic houses.

Activity A.3.3.2 Rice, maize, and vegetable crop/seed production demonstrations

Maize is an essential staple cereal in rural Nepal. Yet, farmers continue to use open pollinated varieties and mostly depend on rain-fed cultivation patterns. KISAN is working with CSISA to demonstrate higher yields of quality maize using hybrid varieties, and improved techniques and

technologies in cultivation and posthas conducted 18 spring maize 33 maize demonstrations in the Far-

3. Demonstrations of rice and maize technologies

KISAN conducted five technology-specific demonstrations: brush-cutter and wheat harvester in Dadeldhura; and four direct seed rice (DSR) demonstrations in Dang, Kapilvastu, Kailali, and Kanchanpur. This DSR approach requires two machines: Sensor Land leveler for leveling and seed drill for sowing rice seed. Both of the machines were provided by CSISA. Farmers are impressed with the much faster plant germination and growth using this method compared to transplanting rice. The use of Nominigold (Herbicide) was demonstrated to control post-emergence weed.

harvest activities. This year, KISAN demonstrations in the Mid-West and West with the coordinating DADO, Baitadi and Agriculture Service Centre, where the DADO provided 9 kg of maize seed.

In the Far-West, KISAN conducted 11 rice production demonstrations using seed and fertilizer purchased from the local agrovet as well as the



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government Regional Seed lab and private Seed Company. In the Mid-West KISAN

Likewise, KISAN has conducted demonstrations of agronomic management practices for vegetables including: selection of suitable location; use of improved nursery raising techniques; maintaining proper sowing method/practices; maintaining spacing, transplanting, and transplanting distance; and use of raised bed technology in some varieties. KISAN has also demonstrated: use of IPM technology for pest management and adoption of timely precautions by applying necessary treatments when pests and diseases appear; use of MIT system with proper irrigation as needed; proper weeding, hoeing, fertilization, etc.; and data recording for sowing date, transplanting date, harvesting dates, and yield. Similarly, records of all the costs incurred during the process of production (seeds, fertilizers, pesticides, labors, micronutrients, etc.) have been maintained to help farmers calculate the cost-benefit ratios. In Y2, KISAN has conducted 461 demonstrations for vegetables: 52 in the Far-West; 365 in the Mid-West; and 44 in the West.

Moreover, in Y2, KISAN has conducted various demonstrations in change agents' fields to help disseminate improved techniques for the larger Feed the Future Initiative in Nepal – CSISA, HMRP/CYMMIT, and IPM-IL. KISAN, with the technical support of the IPM-IL project, demonstrated hybrid maize Rajkumar versus improved the Arun-2 variety by line sowing in 400 m² area in Banke. CSISA provided the seeds; all other expenses are being covered by KISAN. See text Boxes 3 and 4 for additional highlights on rice and maize demonstrations.



conducted 10 rice demonstrations.

Figure 14. Farmers visited multiple sites to learn new technologies, including visits to this CSISA maize trial using the jab planter



Figure 15. Farmers learned about the benefits of improved technologies, for example, the difference in maize growth using jab planter and direct broadcasting

Lentil demonstration

The purpose of the demonstration was to learn and see the effect of Rhizobium inoculation in 21 farmers' fields. A total of 31 lentil



Figure 16. Farmers learned new technologies in multiple crops, such as this DSR demonstration using a seed drill in Kapilvastu

demonstrations were completed with comparison between farmers' current practices and improved practice i.e. between broadcasting method and line sowing method. Results show that line showing with rhizobium inoculated has better production results. The untimely and uncertain rain during the winter of 2013 has affected production and growth of lentil crops adversely – both for lowland and upland crops.

Activity A.3.3.3 Demonstration of bio-pesticide (Jhol-mol) technology

Use of bio-pesticides is another best alternative for rural areas. IPM and Integrated Plant Nutrition System (IPNS) are also in demand. It utilizes local resources for nutrient management and as plant protection measures. Jhol-mol is a homemade pest repellent liquid prepared by fermenting locally available plant material in cow urine. It is being widely used as insect repellent/control by vegetable

farmers in remote project VDCs where other pesticides are not available. Since this is prepared in cow urine, it also provides some nutrients to plants.

KISAN conducted 308 Jhol-mol demonstrations in farmers groups for wider use and application of the Jhol-mol in farmer fields. In the Mid-West, KISAN carried out 256 Jhol-mol demonstrations, 34 in the Far-West, and 18 in the West.

KISAN beneficiaries in Sitapur VDC, Banke district received the second place prize for excellent preparation of bio-pesticides (Jhol-mol) in the 7th National-level Organic Fair organized by DADO in Kohalpur, Banke district.



Figure 17. Farmers learned about the advantages of biopesticide (Jhol-mol) including environmental safety and benefits for soil nutrients



Figure 18. Female farmers learn how to prepare Jhol-mol at a demonstration in Argakhachi

Activity A.3.3.4 Demonstration of storage technology of cereals and legumes (Super-bag, etc.)

Post-harvest assessments generally assume 10-20% of grain losses occur after harvest. An assessment carried out by KISAN in Y2indicated losses of up to 40% from fungal diseases and pests. To address this issue, KISAN has introduced plastic super bags as a technology to restrict the outside moisture from entering into grain, and also to prevent external pests from depleting the produce volume. There were 105 bags used in the Mid-West for this demonstration. Farmers have used these bags to protect their cereals and pulses grain as well as seed. It is very good method to minimize losses from rats, moisture, weevil, etc. KISAN conducted 35 demonstrations of storage technology for cereals and legumes (super-bag, etc.). Activity A.3.3.5 Irrigation support to farmers.

As outlined in section A.1.2, the KISAN Project has conducted 19 different demonstrations at different sites to orient farmers to drip irrigation, plastic pond, and ferro-cement tanks. A result of the demonstrations was that collaborating partners including the DADO established an additional 26 irrigation schemes including canal construction and repair, pipe, and lift irrigation.

Activity A.3.4 Organized exposure visits KISAN field day visits to demonstration plots

Under this activity, KISAN beneficiaries observe various demonstrations established by KISAN as well as other collaborative partners. This helps KISAN to understand the effects of different technologies on crop production. KISAN field day visits were completed in the Mid-West for 237

farmers, LSPs, and agrovets. The objective of this technologies in vegetable production, including seasons (summer, rainy, winter) though this summer season.

Farmers were very inspired with the stalking Dang with wire and plastic rope. This has made harvesting, insecticide/fungicide spray, etc. easier. bitter gourd.

KISAN field day visits

KISAN field day visits were held at various collaboration with local stakeholders. The Farmers'



Figure 19. Farmers visited other farmers' plots to see what successes they are having with new technologies, such as this bitter gourd tunnel in Dang

activity was to disseminate new ventilated plastic houses for different technology is most suited for the

method for bitter gourd cultivation in de-shooting, weeding, top dressing, As a result they harvest better quality

authorities in the project districts in Field Day visit programs give farmers an opportunity to observe improved technologies adopted by other farmers in their demonstration plots, and to enable the participating farmers to share experiences with each other. Visits have included vegetable seed production and tomato production. The visits indicate that not only are KISAN farmers adopting more plastic houses and other improved technologies, but that farmers other than KISAN beneficiaries are also adopting new technologies demonstrated by KISAN.



Figure 20. By visiting demonstration sites, farmers were able to see the different between growing crops using traditional methods and improved technology, such as these two bitter gourd plots

Seed companies, agrovets, cooperatives, change agents including GON, seed producers, etc. to CSISA, HMRP, IPM-IL, CEAPRED, and other sites

In Y2, KISAN conducted exposure visits to build and technologies being promoted by FTF partners among project LSPs, seed companies, agrovets, producers. Separate visits were conducted to Dailekh, Jajarkot, Salyan, Rupandehi, Nawalparasi, more are being planned for early Y3. See text for two to three days, depending upon sites. at Satbariya-7, Bijulipur where a trial was difference of Rajkumar and Arun 2, fertilizer dose



Figure 21. Farmers learned about techniques and technologies
YEAR TWO ANNIAMINATION Stages of production, including nursery management 72

awareness of improved techniques CSISA, IPM-IL, CEAPRED, and HMRP cooperatives, change agents, and seed sites in Banke, Bardiya, Surkhet, and Dang districts in late Y2 and Box 5 for visit highlights. Visits were Participants observed the CSISA site conducted to analyze varietal application, and mulching effect with

four treatments. In demonstrations, there was opportunity for participants to observe the differences between traditional and improved technologies, such as broadcasting and planting by jab planter planting method. The farmers came to the conclusion that hybrid seeds (Rajkumar) with double dose of fertilizer, and planted using jab planters have the best performance.

Farmers also visited the IPM-IL research site on bitter gourd with treatment of compost and trichoderma at Chhinchu-3, Harre. Farmers concluded that the best field was the one treated by compost as clearly characterized by the physical properties. They then visited farms where tomato seedlings were being grown in both plastic trays and nursery beds. The best performance was seedlings raised in trays with growing media compost and coco peat in a 1:1 ratio.

The visitors also interacted with Pabitra Janakalyan Cooperative Ltd, Mehelkuna-I, Surkhet. The cooperative chairperson Mr. Nawal Singh Khatri and secretary Mr. Nar Bahadur Chanda elaborated on the ongoing activities especially vegetable seed production of onion, okra, radish, bitter gourd, and bottle gourd. They also shared that the annual production of the aforementioned seeds was 33 tons. Exposure visit participants stated that the interactions with the cooperative were very fruitful; agrovets and other representatives were very interested in buying onion and okra seed from the cooperative.

5. Exposure visit highlights

- The effects of recommended doses of fertilizer in demo plots were quite impressive in maize and rice plot trials as indicated in the maize trail plot in Gadhi surkhet and rice trial plot in Uttarganga Surkhet and Naubasta, Banke. An estimated 30% increase in maize yield is expected as a result of changing the seed variety of maize, timely sowing, maintaining optimum plant population, and proper weed management.
- Participants show a preference for Suhka I and 3 for next year's rice crop in upland areas.
- Cultivation using hybrid rice and farm mechanization is increasing from 9 ha to 150 ha under mechanization in Nawalparasi and Rupandehi.

In Y2, the USAID team, KISAN team, LSPs, agrovets, and seed cooperatives/entrepreneurs from Banke and Bardia visited the CSISA mechanization trial plots in Naubasta, Banke to learn about farm mechanization. Surkhet and Dailekh teams visited Chinchhu and Gadhi VDCs in Surkhet to observe IPM-IL trial of tomato and maize GxE trial plots. The main objectives of the visit were to interact with the farmers, observe plant status and different treatments of rice varieties, and to disseminate the practices in the farmer fields. Trial methodologies were explained and the farmers received information related to the trials. Likewise, information related to commercial production of potential crops was shared.

In Y2, staff also learned about mechanized rice production through visits

to CYMMIT's ANEP sites in Rupandehi and Nawalparasi districts to learn about commercialized mechanized practices of rice production such as DSR, zero tillage, TPR (Puddle and un puddle).

Intra district exposure visit of KISAN farmers and change agents to demo plots

A total of eight (Banke, Bardiya, Surkhet, Dailekh, Jajarkot, Dang, Salyan, and Rolpa) intra exposure visit of LSPs, agrovets, and key farmers were organized in the final quarter of Y2 to observe new technologies in demo plots of KISAN lead farmers. Farmers learned about raised bed technology of onion, plastic tunnel (cucumber in a combination of bitter gourd), plastic house technology for tomato, Jhol-mol technology, mulching of cucumber, and IPM technology. Participants are expected to adopt the viewed technologies in their own farms and influence neighbors as well. Field visit for change agents (agrovets, traders, and LSPs) for market expansion possibility in KISAN Project

In Y2, KISAN organized seven (Banke, Bardiya, Surkhet, Dailekh Jajarkot, Dang, and Salyan) field visits for change agents (agrovets, traders, and LSPs) for market expansion possibility in KISAN areas. The visits were designed to help participants gain knowledge on business linkages and value chain systems developed for sustainable input-output marketing. Major visit sites were MPC/CCs, wholesalers, seed companies, seed cooperatives, and agrovets.

Commercial vegetable farms with improved technologies being adopted by farmers were observed, and technical knowledge shared among participants and producer farmers in the field.

Participants interacted with the Agriculture Market Committee about output marketing status, market networks, challenges on output marketing, and gained knowledge on output marketing and role of MPC/CC. They also learned about opportunities and challenges in input marketing.

Participants observed wholesale markets, and learned about current market demand and supply. Internal demands are not sufficient and markets appear to be dependent on external markets beyond KISAN areas, or, in the case of supply, meet market requirements with Indian products.

Activity A.3.5 Developed extension messages

In Y2, the KISAN Project has started extension message broadcasting through FM/Radio to raise awareness of new technologies to wider audiences to boost agriculture production and productivity in KISAN zone of influence areas. MOUs have been signed between the project and FM stations for one year and the FMs are broadcasting extension messages two times per month. The extension messages orient listeners on a range of issues such as how to produce healthy vegetable and rice seedlings and their management; plastic house/plastic tunnel technology; raised bed technology; plastic tray nurseries; uses of common mulching and plastic mulch technology; use of improved seeds; packages of practices for cereals and vegetable crops; use of IPM tools and technologies, etc.

Table XXII. Extension messages through FM radio				
District	Name of the FM radio	Time	Day	

Bheri

Dailekh	Dhurvtara	7:00-8:00pm	Tuesday
Surkhet	Bulbule	8:00-9:00pm	Monday
Jajarkot	Hamro paila	7:30-8:00pm	Monday
Banke	Bheri Aawaj	7:45-8:00pm	Thursday
Bardiya	Babai	7:16am	Sunday, Tuesday, Thursday
Rapti			
Dang	Navayug, Hamro Pahuch, Madhyapaschim	7:30-8:00pm	Monday
Salyan	Rapti	8:00-9:00pm	Wednesday, Tuesday, Saturday
Rolpa	Hamro paila	7:30-8:00pm	Monday, Wednesday

B. COMPONENT A, IR 2: INCREASED AGRICULTURE VALUE CHAIN PRODUCTIVITY LEADING TO GREATER ON- AND OFF-FARM JOBS

Through KISAN's Component A, IR 2: Increased Agriculture Value Chain Productivity Leading to Greater On- and Off-Farm Jobs, the project will focus on establishing market linkages for farmers and creating demand for both inputs and farm outcomes. To ensure that gains in productivity are sustainable and result in increased incomes, KISAN will promote market-led agriculture leading to increased on- and off-farm jobs. Outcome 4 will work with the staff working on other outcomes to develop collection centers, strengthen wholesale markets, and improve the availability of market information.

4. OUTCOME 4, SUB-IR 2.1: IMPROVED MARKET EFFICIENCY

Outcome 4 focuses on establishing market linkages for farmers and creating demand for both inputs and farm outcomes. Under Outcome 4, KISAN is developing collection centers, strengthening wholesale markets, and improving the availability of market information to ensure farmers can continue to sell their high-value agriculture products. Table XXV shows the number of Collection Centers and MPCs established and functioning due to KISAN facilitation. KISAN has facilitated the establishment of 30 CCs/MPCs in Y2.

KISAN will establish and strengthen Marketing and Planning Committees (MPCs) and coordinate with farmers groups to establish market collection centers within their pocket area where they can sell their produce, purchase inputs, and use productivity-enhancing technologies.

MPCs supported by KISAN will include smallholders, output traders/wholesalers, and DADO representatives. MPCs will play a crucial role in organizing and managing collection centers and facilitating a greater volume of aggregate sales to private sector buyers.

Table XXIII. Outcome 4: Improved market efficiency

Performance Indicator	Target Y2	Achievement Y2	Achievement Y2Q4	Target LOP	Achievement LOP
Number of collection centers/MPC established and functioning via facilitation of USG (either through funding or leveraging)	30	30	15	50	30

Activity A.4.1 Conducted assessment of collection centers and markets

In Y2, KISAN conducted an initial assessment of MPCs. KISAN staff mapped collection centers and major markets throughout the 20 districts. Staff conducted informal meetings with MPC members, and conducted a Strength, Weakness, Opportunity, and Threat (SWOT) analysis of MPCs to identify targeted ways to strengthen MPCs during the remainder of theproject.

Table XXIV. Functional and non-functional MPCs in Western and Far-Western Regions

District	Formation MPC/CC	Strength of MPC/CC	Material Support	Follow Up
Achham	0	0	0	I
Arghakhanchi	0	0	0	I
Baitadi	0	0	0	0
Banke	0	3	0	4
Bardiya	I	2	I	4
Dadeldhura	I	I	0	2
Dailekh	I	2	I	4
Dang	I	2	I	4
Doti	I	I	0	I

Table XXIV. Functional and non-functional MPCs in Western and Far-Western Regions

District	Formation MPC/CC	Strength of MPC/CC	Material Support	Follow Up
Gulmi	I	2	I	4
Jajarkot	0	0	0	0
Kailali	0	0	0	0
Kanchanpur	0	0	0	0
Kapilbastu	0	5	0	0
Palpa	0	0	0	4
Pyuthan	0	0	0	0
Rolpa	0	0	0	I
Rukum	0	2	I	4
Salyan	I	2	0	5
Surkhet	I	3	0	4
Total	8	25	5	43

KISAN staff assessed a total of 156 MPCs in 20 districts, and went on to complete a more comprehensive assessment of 69 MPCs/CCs/haat bazaars. District staff met with MPC/CC committee members, local traders, agrovets, and farmer groups to understand the current status of the MPC, and to explore ways to revive and strengthen them. The situation of these 69 MPCs is summarized below.

- **Strengths**: Farmers are actively involved in vegetable production; most MPCs are operational; there are functional linkages and relationships with producers and wholesalers; there is sound infrastructure; and there are local markets and consumers.
- Weaknesses: Seasonal production; MPC leaders are influenced by political affiliations; mistrust between MPCs and producer farmers; lack of coordination between producers and wholesales; weak management; unsustainable administrative practices; inactive executive committee members and advisory board; limited volume of produce (due to lack of irrigation facilities); farmers lack of market price information; lack of timely seed and fertilizer inputs; lack of grading and packaging, lack of cold storage; and inactive collection centers.

- **Opportunities**: Proactive projects and supporting organizations, including DADOs and projects like KISAN; possibilities to revive CCs; strong markets, so there is the potential of introducing contract farming and differentiated vegetable farming; farmers could increase their productivity with improved access to micro irrigation and microfinance services; road expansion; and expanding road and transportation networks.
- Threats: Road expansion means farmers have options for selling or trading their produce and they are no longer bringing their products to any specific CC consistently; lack of trust between producer groups, MPC, and wholesalers; MPCs are not accountable; inadequate budget to pursue CC rehabilitation efforts; and high volume of vegetable imports from regional and district markets.

Activity B.4.2 Identified priorities and plans for agricultural collection centers and wholesale markets Agriculture output and input marketing workshop

KISAN conducted half-day Agriculture Output and Input Marketing workshops in nine districts in the latter part of Y2in Banke, Bardiya, Surkhet, Dailekh, Jajarkot, Dang, Salyan, Rukum, and Gulmi to:

- Identify problems in demand and supply of fresh vegetables in the district;
- Establish the role of stakeholders to manage district agriculture products;
- Explore internal and output markets for agriculture products; and
- Identify problems in demand and supply of rice, maize, and lentil seeds in the districts.

Main agenda of the discussion:

- The opportunities based on the mentioned and discussed problems;
- To build relations with Government and Non-Government Organizations for the promotion of agriculture production, and development of market networks and commercial services;
- To establish sound relations with local, regional, and national-level consumers and producers based on farmer needs such as fulfillment
 of agriculture production materials in coordination with agriculture banks, information centers, seed production companies, local
 businesses, and related line agencies ensuring the relationship with participants of market price series; and

 Based on the discussion and coordination with different agencies, commercial plans need to be developed and will aid market production, to agree to prices for produce, and for appropriate marketing.

Expected outcomes:

- Effective working relationships will be built with government and non-government organizations for the promotion of agriculture production, and development of market networks and commercial services;
- Sound relations will be established with local, regional, and national-level consumers and producers based on the need of farmers such as fulfillment of agriculture production materials on the coordination with agriculture banks, information centers, seed production companies, local business linkages, and related line agencies ensuring the relationship with participants of market price series;
- Based on the discussion and coordination with different line agencies, the commercial plans will support production, fixing prices of produce, and appropriate marketing;
- This interaction meeting is also very helpful to link the agrovets to each other (dealers and retailers), and with seed companies and cooperatives;
- As a result of these relationships, plastic trays and coco peat is available from Sishahania VDC to Panchkule VDC. Farmers can buy Silpolin plastic in nearby towns i.e. Lamahi, Ghorahi, Tulsipur at reasonable prices. Recent hybrid seeds of cucumber, cauliflower, tomato, bio-fertilizer i.e pseudomonas, tricoderma, etc. will be available if demanded at nearby agrovets;
- The linkage creation workshop to link seed companies, cooperatives, agrovets, and seed producers for smooth supply of agriculture inputs in the local community will increase the availability of agriculture inputs i.e. improved seed, silpolin plastic, plastic trays, biofertilizers, new hybrid varieties, etc.;
- Import of fresh vegetables continues in Banke at 15 Mt/day and Indian vegetables make up about 50% of produce sold at Gulariya market;
- Farmers were ready for yearly production of fresh vegetables at commercial scale rather than just for home consumption;
- Traders are agreeing to pay mutually agreeable price for products;
- If farmers produced year round, all products were purchased by traders;
- Established linkages between traders, agrovets, FGs, and CC members; and

• Prabal Shahi Bulbule wholesale market indicates estimated sales of NPR 350,000,000 in vegetables at the market. He also indicated that if a producer sells his product of a price of 12 per kg then the consumer have to pay minimum of NRs 28 per kg through retailer (extra charges include collection charge NRs 1; loss NRs 1; transportation NRs 2; grading and packaging NRs 1; net profit of wholesaler NRs 2; load and unload NRs 2; from wholesaler to retailer riksha NRs 1; loading NRs 1; loss NRs 2; and net profit of retailer NRs 3).

Producers, agrovets, seed cooperatives, MPCs/CCs, and retailers as well as wholesalers from the districts and outside participated in the workshop. Information was collected using SWOT analysis by forming groups in different sectors such as vegetable producers, seed producers, traders, agrovets, and MPC/CC. The SWOT summary for the Hill and Terai districts are as follow:

Conclusions:

Production of fresh vegetables and seeds is limited, hence increase in area and volume of production of fresh vegetables and seeds is crucial. Agrovets indicate a need for trainings in bio-fertilizers and bio-pesticides. Traders are not getting year-round vegetables due to seasonal operation of collection center.

Recommendations:

May-August months is the main market window for hill farmers to supply the Terai when the rains hamper crop production in the plains.

Terai farmers have a great market window in the hill districts from December-April along the hill district corridors.

These learnings have been integrated into KISAN trainings and during interactions with input suppliers and market players. Details are presented in Table XXVII below.

Table XXV. Opp	Table XXV. Opportunities and challenges in the hill districts				
	Strength	Weakness	Opportunity	Challenge	
Vegetable Production	Self-employment opportunities at village level Increase incomes and enhance economic conditions	Farmers have insufficient technical knowledge Lack of production plan/cost of production Low risk preference	Farmers can earn good income per unit area through off-season production Can export fresh vegetables	Lack of irrigation, year- round market facility, availability of production inputs in districts	

	portunities and challer	Weakness	One or a who we the c	Challange
	Strength		Opportunity	Challenge
		among producers	outside districts	
Seed Production	More money can be made from small areas Increased economic status and employment generation	No foundation seeds are available when needed Lack of suitable technologies Poor irrigation, transportation, and storage Lack of nearby markets	Network can be developed between producers and seed traders Naturally feasible areas for vegetable and cereal seed production	Poor road and market networks Disease and insect problems
Traders	High demand for vegetables in and out of the district Higher profits from selling vegetables Creates self-employment opportunity	Poor production planning resulting in high volume of single items, less production, poor/no grading Farmers lack of production knowledge No commercial production Farmers expect high price throughout season	Develop market networks Export vegetables	Road blockages during the rainy season
Agrovets	Act as a vendor for producers Provide access to inputs market for	Farmers do not think commercially Agrovets lack technical knowledge	Could be a source of technical information for rural farmers	Lack of commercial/production plan from producers No collective demand

	Strength	Weakness	Opportunity	Challenge
	farmers	Poor service-oriented attidue Poor coordination among agrovets	Creates employment opportunity in rural areas High demand of inputs markets	of inputs from groups Farmers lack technical knowledge
MPC/CC	Collection of products from different groups and marketing them to distant markets from the districts	Poor coordination between producers and MPCs/CCs Poor grading Poor marketing information Poor/no marketing planning in MPCs/CCs	Institutional development of MPCs/CCs in the district for sustainable marketing	Low volume of production Poor MPC/CC infrastructure Poor road networks No year-round transportation facility Inactive/passive members of MPC/CCs

Activity A.4.3 Conducted exposure visits

As part of this activity, KISAN created learning opportunities along the agriculture value chain between beneficiary farmers, local service providers, and local stakeholder counterparts, but did not conduct exposure visits specifically, under this activity. Based on consultant Tom Green's findings, exposure visits are being planned to Madan Pokhara and Bulbule markets.

Activity A.4.4 Strengthened market linkages

KISAN organized nine public-private sector (Banke, Bardiya, Surkhet, Dailekh, Jajarkot, KISAN MPCs, LSPs, agrovets, cooperatives, and marketing strategies, and to foster linkages discussions revolved around:

- MPC status update and data collection;
- Interaction with MPC members for sales:
- Trader mapping and data collection;
- Agrovet data collection; and
- Support and coordination for linkage

Interaction meeting between LSPs and linkages



Figure 22. KISAN strengthened business linakges along the value chain through meetings and workshops, such as this workshop on strengthening linkages between MIT dealers and change agents in Ghorahi, Dang

partnership meetings the Mid-West Dang, Salyan, Rukum, and Rolpa) to orient output traders to discuss key markets, between actors in the value chain. Key

MPC strengthening and planning, and

development.

agrovets to establish business

A total of nine formal interaction meetings were organized between LSPs and agrovets to establish business linkages. Cooperatives and groups also participated. Major outcomes of the meetings were as follows:

- KISAN LSPs are linked to agrovets from different clusters for timely and quality input supply to the farmers groups through effective business coordination and linkages.
- Effective linkage and coordination of LSPs with local government body (VDC) and district-level organization (DADO) for sustainable development of KISAN farmer groups and beneficiaries.
- Effective coordination and linkages of LSPs
 MFIs and cooperatives.
- Commitment from cooperatives to enroll in their cooperatives and provide them farming.

and KISAN beneficiaries with available

KISAN beneficiaries as a share member credit for commercial vegetable



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- Commitment from LSPs to forecast demand for quality seeds and input supply from KISAN beneficiaries and disseminate information on demand to locally available agrovets and to provide timely effective technical support to KISAN farmer groups when needed.
- Commitment from agrovets to provide regular counseling and timely technical support to KISAN farmers groups and beneficiaries.
- Discussion of roles and responsibilities of agrovets and LSPs. LSPs are the bridge between the farmers and agrovets. The main
 responsibilities of LSPs were to orient farmers about new technologies and types of new varieties, and also to market seeds produced by
 farmers to the agrovets.
- Strong linkage and coordination between LSP, KISAN change agents, farmers, and agrovets will be established. The service provided by agrovets will be prioritized to increase effectiveness of the KISAN trainings.

District-level interaction meeting of LSPs to strengthen linkages with DADO

A total of nine formal interaction meetings were organized between District Agriculture Development Office and KISAN LSPs in nine Mid-West districts to help build relationships for delivery of technical services to rural farmers. The major outcomes of the meeting are that DADO can utilize these LSPs to disseminate technologies in rural areas as model farmers in the village, and as resource persons for conducting group level trainings in groups.

LSPs were oriented to the five DADO agriculture initiatives – extension, horticulture, fisheries, plant protection, and planning section for market development. DADO programs are mostly implemented through group-support approaches, and some at the individual level like youth self-employment program, fish program, maize, lentil and onion missions, and commercial banana farming. Recently DADO started the crop insurance program, where a crop is insured on the basis of the cost of cultivation i.e. 5% of total cost of production out of which 50% is paid by DADO and 50% by the farmers. If insured crops are damaged by natural hazards like pests and diseases, hailstones, and/or draught, farmers can claim 90% of the insured cost.

LSPs have also started to visit DADO and Agriculture Service Centers (ASCs) for information on programs and opportunities for their VDCs/groups. For example, some LSPs are exploring crop insurance for KISAN farmers. LSPs can work with DADO, ASC, and KISAN staff to help groups' of farmers access insurance. In addition, KISAN helps register farmers groups with the DADO and ASC. These registered groups will be provided with micro irrigation and other possible services by DADO and ASC. After the project ends, we expect LSPs to serve as a bridge between service providers (especially agrovets and markets) and the farmers groups in their service areas. Some of the LSPs are connected to both KISAN and the DADO program in their communities, and actively supporting DADO activities. The interactions have built goodwill and established a potential for LSPs to serve as a bridge between government services and communities. After the initial eight months

of project implementation, LSPs are actively establishing linkages with various programs organized by DADO and other stakeholders in their service areas.

Established linkages between LSP/Change Agents and MFI (Savings groups/Cooperatives)

In Y2, a total of eight interaction meetings were held with LSPs, agrovets, and MFIs with the objectives

to create linkages and facilitate business expansion with limited capital. MWDR KISAN households have started group-level savings and credit. Similarly, 1,790 households are affiliated with cooperatives and bank/FINGO and NPR 18,901,735 in loans have been disbursed for use in agriculture. MWDR district-wide details are given in Table XXVI.

MIT dealers and change agents linkage strengthening workshop

A total of eight MIT dealers' linkage strengthening workshops, including change agents, were organized in the Mid-West districts. The event brought MIT dealers, agrovets, LSPs, and leader farmers together to sharing and collect information about the availability and use of MIT. Strong linkage and coordination between LSPs, KISAN's change agents, farmers, agrovets, and MIT traders/dealers will be established. The service provided by MIT dealers/traders will be prioritized for increasing the effectiveness of KISAN trainings. Agrovets have committed to serve as sub dealers of MIT systems, especially of drip irrigation which is more effective in areas with poor irrigation facilities. Demand and supply chains have been started between producers (FG/farmers) and suppliers (agrovets) for quality and timely inputs. KISAN farmers have established linkages with agrovets for quality inputs, and agrovets are playing active role for timely availability of inputs as per the request of the farmers. Farmers are gradually adopting this technology.

Activity A.4.5 Identified and strengthened existing MPCs Strengthened existing but inactive MPC/CC/haat bazaars

As outlined in the earlier section, the KISAN team has identified capacity building needs to strengthen MPCs (see Activity A.4.1) so they can better serve the farmers and markets. KISAN is taking a systematic approach to strengthening MPCs. By reviving MPCs that are currently

Table XXVI. Beneficiaries engaged in cooperatives, FINGOs, etc. by district

District	No. of beneficiaries engaged in Coops/MFDBs/FINGOs	Loan disbursements
Banke	286	850,000
Bardiya	175	3,137,200
Surkhet	150	10,323,454
Dailekh	300	728,000
Jajarkot	0	0
Total	911	15,038,654
Dang	263	283,000
Salyan	247	1,154,525
Rukum	0	0
Rolpa	157	2,351,556
Pyuthan	212	74,000
Total	879	3,863,081
Total	1,790	18,901,735

inactive through trainings and demonstration events, KISAN will create market outlets for hundreds of farmers in project VDCs. The markets must be geographically relevant or farmers will not be able to get their products to market. Some MPCs were found to be non-functional because there is low volume of production, weak linkage with producers and traders, weak management, weak bookkeeping, etc. As KISAN increases the number of famers producing for markets, we are increasing the supply for those markets that didn't have enough supply

Staff first conducted a general assessment of MPCs in the KISAN area to identify how many were functional, and how many were not; then conducted SWOT analysis on the functional ones. KISAN is currently analyzing the assessment data to prioritize MPC needs, and will develop a training plan and curriculum for MPCs in Y3. As per the SWOT indication, the trainings will focus on:

- Organizational capacity building;
- Strategic planning;
- Customer and buyer relationships;
- Collecting and sharing specific market demand data to farmers; and
- How to conduct economic analysis.

A total of 159 MPCs/CCs/haat bazaars were assessed, out of which 66 were found to be currently inactive. The reasons for MPCs/CCs/haat bazaars being non-functional were found to be due to limited production, inactive executive members, lack of output traders, lack of input traders, and expanding road networks. In Y2, KISAN staff conducted a series of meetings with MPCs/CCs/haat bazaar executive members and strengthened 27 MPCs/CCs. KISAN will continue to work with the remaining 63 as well as others in Y3.

Material support to MPCs/CCs

KISAN has supported 11 newly formed MPCs/CCs (Banke I, Bardiya I, Surkhet I, Dailekh I, Jajarkot I, Dang I, Salyan I, Rolpa I, Pyuthan I, Gulmi I, Kailali I) with materials including weights, scales, tarpaulin covers, letter pads, logo, registers, paper, tin boxes, calculator, and sign board. Letter pad and logo of MPCs are very valuable and are mainly used for leveraging collection. KISAN will provide similar support to another six new MPCs.

Follow-up interaction meetings with MPCs

Formal meetings were organized in 60 MPCs - four in each of the 10 Mid-West districts, four in Palpa, Gulmi, and Kapilvastu, and two in Argakhanchi, Doti, Kailai, and Kanchanpur. The series of formal and informal meetings will be very effective in reviving weak and non-functional MPCs. Since these events, 27 MPCs have been revived.

Activity A.4.6 Strengthened wholesale markets

KISAN will work with MPCs/wholesale markets to develop business plans to optimize their businesses and market delivery mechanisms. Three activities to strengthen wholesale markets have been scheduled for Y3 in Butwal Attariya and Kohalpur wholesale markets.

Wholesale markets expert Mr. Tom Green traveled to Nepal for an assessment of wholesale markets in KISAN's Mid-West districts from November 18, 2013 to December 8, 2013. The objective of the assessment was to evaluate the strengths and weaknesses of existing wholesale markets, their ability to absorb increased production, and to make recommendations on where KISAN interventions would be best targeted to strengthen the value-chain weaknesses. The assignment involved individual assessments of key collection centers and wholesale markets in and along the Kathmandu, Butwal, Nepalgunj, and Surkhet corridor. In Surkhet, the consultant met with farmers and CC members, learned about the current situation of the CCs, their management approach, and plans for the future. The consultant noted that properly functioning markets can benefit all stakeholders along the value chain from the producers to retailers. However, for markets to function there needs to be trust between the value chain actors. The best way to build up trust is to increase everyone's knowledge and communication. The key recommendations include:

- Create grading standards. Ideally the government should do this, but in the absence of the government defined standards, traders could develop them. Grading standards would define different grades (premium, standard, poor) so that products could be graded on the farm or at the collection center, and premium prices could reward farmers with the highest quality. This would reduce loss.
- Have traders explain their marketing costs (transportation, loss, poor quality product, etc.) to the farmers so farmers understand the margin between what traders pay and what the final and retail market pays. If farmers understand the costs, they may be able to reduce the market cost. They are also to trust the trader and his price. For example, if traders lose 40% of their product, then farmers could improve harvest and post-harvest handling that could reduce loss. If the trader can sell more of the product, the increased revenue could be passed on to the farmer.
- MPCs are weak and KISAN could help build their capacity by providing training on organizational management, recordkeeping, income generation, and other areas. Ideally the MPC should earn enough money to hire staff to keep the operation running professionally. If managed professionally, farmers will be more interested in selling product to them, ensuring their sustainability.

- The government plays an important role directly and indirectly supporting the value chain. Things the government could do include better coordination regarding where collection centers are established, defining the rules for wholesale markets that are publically and privately owned and developing nation-wide standard for sub-sectors.
- Business and operational planning for larger wholesale markets will ensure absorption of increased supply and may lower marketing
 costs.
- Projects such as KISAN should promote the passage of the Marketing Act pending with the GON.
- Once thriving MPCs are now defunct but could be revived with support of KISAN.
- MPCs would benefit from strategic plans.
- Two successful MPCs, the Madan Pokhara Cooperative and MPC in Palpa with a satellite station at Butwal, and Bulbule Agrimarket Wholesaler in Surkhet should be used as destinations for exposure visits under the KISAN Project.
- KISAN should develop crop and market calendars for each agro-ecological area.

The recommendations are being incorporated in training materials, used in trainings/orientations, and used to select best places to which KISAN will conduct exposure visits. Based on the report, exposure activities have been planned to three specific markets – two successful MPCs, the Madan Pokhara Cooperative and MPC in Palpa with a satellite station at Butwal, and Bulbule Agrimarket Wholesaler in Surkhet. KISAN has also created new staff positions to focus on the CC and wholesale markets.

Activity A.4.7 Formed and strengthened new MPCs and established collection centers

During the last three quarters, KISAN focused on the 20 districts where there are some established MPCs and CC that the project can further strengthen; there are some inactive MPCs that KISAN may need to revive; and in certain locations as per the need, may have to establish new ones.

A total of 15 new MPC/CC/haat bazaars were formed in Y2, one in each district of Banke, Bardiya, Surkhet, Dailekh, Jajarkot, Dang, Salyan, Pyuthan, Rolpa, Kapilvastu, Gulmi, Achham, Doti, Dadeldhura, and Baitadi. Out of these 15 new MPCs, two have registered in DADO (Nabjyoti Krishi Upaj bazaar samitte Ghodabas, Dailekh and Deurali Krishi Upaj bazaar Samittee, Naubasta Banke).

Activity A.4.8 Explored and established ICT market information system needs

KISAN is exploring potential areas where use of information and communication technologies can impact KISAN beneficiary outputs in the project areas. A total of nine MOUs have been signed with more than nine FM radio stations in nine MWDR districts except Pyuthan to broadcast wholesale price of high-value vegetables. The FM/radio program has been operating since April-June 2014 three times per week and will help producer farmers learn wholesale prices in respective district markets in Banke, Bardiya, Surkhet, Dailekh, Jajarkot, Dang, Salyan, and Rukum. See Table XXIX for additional details on the stations and frequency of messages.

Table XXVII. Broadcasting market prices through FM radio

District	Name of the FM radio	Time	Frequency
Banke	Broadcasting continuously from 16th of April, 2014 through 95.6 MHz	2:00, 6:00, and 8:00pm	Three times a day on daily basis
Bardiya	Babai FM	after 7:15am	Three times per week on Tuesday and Saturday
Surkhet	Bulbule FM	7:05 to 7:08am	Three times per week
Dailekh	FM, Durba Tara Information is collected by Chamber of commerce Dailekh		Two times per week
Jajarkot	Hamro Paila FM Khalanga FM Information is collected from Khalanga market by Helvetas Nepal; and Kalimati and Thalaha by KISAN	7:30am to 7:40pm	Daily

Table XXVII. Broadcasting market prices through FM radio

District	Name of the FM radio	Time	Frequency
Dang	Nawayug FM; FM Ghorahi and Hamro Pahuch FM	6:00am and before 8:00pm	Twice a day
Salyan	Kapoorkot FM	6:30pm	Tuesday and Friday
Rukum	Sanibheri FM With DADO, Rukum, and Tribeni Agriculture Collection Center,		Three to four times daily

In Y3, KISAN will explore additional possibilities to integrate ICTs for market development. These may include use of SMS to exchange key market information between market players, and use of computers in MPCs.

Lessons learned

- Market-led production in commercial scale leads to development and strengthening of vegetable market system at the district level.
- Strong relationship between producers and MPC/CCs is essential for successful operation and sustainability of MPC/CCs.
- Development of marketing information system plays positive role for price determination/quality maintenance of products.
- There must be a win-win relationship between producers and traders for sustainable marketing.
- Interaction/workshops/exposure is necessary for strengthening MPCs/CCs.

Challenges

• Road blockage, lack of infrastructure in MPC/CC, no transparency, and passive members in MPC/CCs are major challenges for sustainable marketing of vegetables and development of MPC/CCs.

5. OUTCOME 5, SUB-IR 2.2: INCREASED CAPACITY OF GON AND LOCAL ORGANIZATIONS

KISAN is working to build the organizational and technical capacity of local organizations to access and implement USG funding in future activities. This effort is designed to ensure they assume ownership for and carry on implementation of activities introduced by the project to promote inclusive agriculture sector growth. Winrock plans to use the Organizational Capacity Assessment Tool (OCAT) to measure the ability of local organizations and build their capacity in areas where they are weak. With respect to the GON, capacity building will be undertaken in agriculture research and extension. In Y2, KISAN has established linkages with over 1,550 farmer groups receiving USG assistance private enterprises, producers, organizations, water/community forest users associations, women's groups, trade and business associations, and community-based organizations (CBOs).

Activity A.5.1 Increased capacity building of local organizations

As per verbal communication, USAID has suggested that Winrock hold off on building the capacity of local organizations that will eventually take over the KISAN Project activities.

Activity A.5.2 Strengthened partnership with NARC and universities for innovation dissemination

In Y2, NARC has appointed regional focal persons for KISAN. KISAN has also conducted consultation meetings with NARC for further collaboration and signed an MOU. KISAN has successfully linked seed producer groups to NARC to access quality foundation and source seeds. Likewise, KISAN collaborated with NARC through the IPM-IL project to carry out a Tomato Grafting training in NARC Regional Agriculture Research Station, Khahjura, Banke.

KISAN will also work with Agriculture and Forestry University (AFU), Rampur for improved technology dissemination. The Post-Harvest Consultant met with researchers from AFU to get better insight on current status of post-harvest practices and some improved practices identified by AFU. Post-harvest processes that AFU has identified are a need to prioritize (vegetable sorting and storage). AFU has developed an extension leaflet in Nepali language; these can be the basis of farmer training.

KISAN has established linkages with, and plans to work closely with NARC for technical backstopping. KISAN will adopt the NARC research outcomes (e.g. improved varieties of seeds) and also use their expertise on trainings and knowledge sharing. The personnel of NARC Regional Agriculture Research Stations will participate on joint monitoring of the KISAN outcomes.

Until the Outcome 5 approach is finalized, KISAN continues to coordinate with NARC in whatever way possible. NARC is a member of the KISAN NPAC and is consulted with in all major KISAN activities and events at national and district levels.

Activity A.5.3 Strengthened entrepreneurial and organizational skills of small enterprises and community-based organizations

KISAN has worked extensively with local organizations in the project districts. KISAN has worked to linkage/strengthen CC/MPCs, cooperatives, seed networks, as well as agrovets and equipment suppliers.

KISAN has facilitated the formation of 15 new MPCs; another 27 MPCs were strengthened. In the process of reviving these non-functional MPCs, KISAN has facilitated linkages between MPC members, traders, retailers, agrovets, dealers, and KISAN LSPs. KISAN has built capacities of MPCs in recordkeeping of both produce and sales; next year planning; developing crop yearly production charts; and stakeholder coordination for produce marketing with DADO, other MPCs, and regional-level MPCs. These MPCs will coordinate regularly with KISAN and other development projects for sustainable operation of the market. KISAN will also conduct trainings for members of these MPCs in the upcoming quarter.

During the last quarter in Y2, KISAN conducted training for 42 coop members representing 40 cooperatives. The main objective of the training was to develop the organization capacity of those coops. The training was focused on business planning which included inclusiveness, catchment area, product development, stakeholders and competitor analysis, human resource analysis, infrastructure analysis, financial status including PEARLS (monitoring tool) analysis. Among the 42 participants, KISAN also organized an in-country exposure visit for 20 coop members representing 20 coops.

KISAN also conducted a three-day training for Financial Intermediary Non-Government Organization (FINGO). A total of 17 persons representing 8 FINGOs were trained on developing business per GON regulations. All FINGOs should be converted to MFDB by 2015 and for this they should have a business plan on a format developed by Central Bank of Nepal (Nepal Rastra Bank); KISAN provided business plan training on the new format so that these FINGOs were able to develop business plans and convert into MFDBs.

KISAN has also conducted several meetings with other cooperatives on possible approaches to increase their outreach to KISAN farmers for both membership, as well as access to finance. Similar meetings were held with MFIs, vendors, etc.

III. MANAGEMENT AND ADMINISTRATION

A. CONTINUED START UP AND EXPANSION

As of the end of Y2, KISAN has established a presence and activities in all 20 districts. In addition to implementing project activities, and expanding to the Far-Western and Western Regions, KISAN staff focused on training staff and preparing modifications for USAID. The lack of

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clarity of how we are to proceed with Component B has had direct impacts on activity planning and administrative set up in the project districts in the first three quarters in Y2, particularly in terms of beneficiary selection criteria and annual budgeting per district. However, KISAN has continued to consistently roll-out and implement agriculture-related tasks and the modification document in the final quarter of Y2 has cleared all confusion.

I. OFFICE LEASE AND PROCUREMENT

Leasing of office buildings for all 20 districts have been completed by the end of Y2. Necessary office equipment such as table, chairs, computers, office refurbishment items, motorcycles, etc. have also been supplied to ensure smooth functioning of these offices.

Procurement of non-expendable items such as two I5KVA generators, two all-weather 2 ton AC, two multimedia projectors, and 25 laptop computers has been completed and items allocated to respective districts. Two Toyota vehicles are being procured, and in the process of being finalized.

2. MOBILIZING STAFF

During Y2, Winrock has continued to fill positions. As of June 2014, KISAN has hired a total of 200 staff. Of the 200 staff, Winrock hired 105 (Kathmandu – 15, Regional Office – 9, District office – 81); CEAPRED hired 78 (Kathmandu – 3. Regional Office – 4, District – 71); and DEPROSC hired 17 (Kathmandu – 1, Regional Office – 2, District - 14). In view of the changes in KISAN activities as a result of the modifications to the KISAN Contract, KISAN will create necessary positions and hire staff in Y3. While staff recruitment has been completed for the Western and Far-Western Regions, due to overlapping start-up periods for other projects in the KISAN area (AFSP, Suahara, and the FAO Agriculture project), KISAN has experienced a high rate of staff resignations. KISAN staff are continually hiring to fill vacant positions; key positions have been filled at the regional and district levels, including district coordinators, M&E manager, business development service officer (BDSO), marketing supervisor, and VDC coordinator. Screenings are ongoing for the BDSO and agriculture technician positions.

In the Far-West and West, the respective Cluster Managers have given a one-day orientation about the project, targets, and working modality to district teams before assigning them to their VDCs.

Table XXVIII. KISAN Staff List

Staff by category	Organization	Kathmandu Staff	Nepalgunj Staff	District Staff	Total
Professional (Full Time)	WI	9	4	41	54
Professional (Part Time)	WI				0

Staff by category	Organization	Kathmandu Staff	Nepalgunj Staff	District Staff	Total
Staff below Professional Level	WI	3	I	37	39
Support staff	WI	3	4	3	12
Pending Approval	WI				0
Total Winrock Staff		15	9	81	105
Professional (Full Time)	CEAPRED	3	3	14	20
Professional (Part Time)	CEAPRED				0
Staff below Professional Level	CEAPRED		I	57	58
Support staff	CEAPRED				0
Pending Approval	CEAPRED				0
Total CEAPRED Staff		3	4	71	78
Professional (Full Time)	DEPROSC		2	4	6
Professional (Part time)	DEPROSC	I			I
Staff below Professional Level	DEPROSC			10	10
Support staff	DEPROSC				0
Total DEPROSC Staff		I	2	14	17
Grand Total		19	15	166	200

3. PARTNER SUBCONTRACTS

Based on the most recent conversations with USAID, the KISAN Project will not work in Component B. The COR confirmed that KISAN would no longer need the services of Water and Sanitation Health (WASH) partner NEWAH and Nutrition partner NPCS. Winrock terminated contracts with NPCS and NEWAH on December 31, 2013 and January 31, 2014, respectively. Related WASH and Nutrition staff were informed of this situation thereafter.

Contracts and Y3 Detailed Implementation Plans of agriculture partner CEAPRED and access to finance partner DEPROSC have been finalized.

4. KISAN PARTNER COORDINATION

KISAN has continued to hold Partners' Meetings throughout Y2, as well as interactions between partners at the central, regional, and district levels. Staff members are working as one team. Winrock and its partners coordinated to plan and implement field activities; developed and finalized partners' Y2and Y3 scopes of work; clarified responsibilities in district-specific DIPs; planned for project rollout in the six Far-Western and four Western districts; and conducted the two NPAC meetings in Kathmandu.

Winrock kept Component B partners NPCS and NEWAH informed of discussions about proposed contract modification affecting Component B approaches as it continued to evolve between October and December 2013. Winrock informed partners of USAID's decision to discontinue nutrition and WASH activities from the project in a timely manner.

5. STAFF TRAINING

Training of Trainers and staff orientation

KISAN conducted a Training of Trainers and staff orientation for over 80 central, regional, and district-level key staff in the ten Mid-Western districts October 28-31, 2013 in Nepalgunj and an additional 80 in the West and Far-West. The four-day training oriented project staff to all five agriculture-related outcomes and activities in a diverse range of topics. These ranged from beneficiary selection criteria and group formation, improved production technologies and crop production, seed production and certification, post-harvest, IPM, micro-irrigation technology, and multi-use water system. The program also oriented district staff on essential cross-cutting aspects of effective project management, including administration and finance, monitoring and evaluation, coordination with GON, branding and reporting, and leveraging.

Front line staff training increased access

KISAN conducted a three-day TOT on the basic bookkeeping management for project capacity on saving and credit and microfinance training was to familiarize staff with saving, microfinance concepts. The trainings will to conduct one-hour trainings on saving and group level. This will support project staff to link total of nine such TOT were conducted; 25 I overall (58 ATs, 144 LSPs, 13 BDSOs, 14 AMS,



Figure 24. In order to ensure beneficiaries receive the best and most YEAR TWO ANNUSEful information, KISAN has provided staff with orientations on hey topics including savings and credit

to credit

concept of savings and credit and frontline staff to enhance staff systems. The objective of the credit, cooperative, and strengthen staff capacity to be able credit and account keeping at the the beneficiaries to access credit. A staff participated in the trainings 9 ITs, and 13 VDCCs).

Microfinance TOT for staff

In order to enhance the capacity of staff to integrate microfinance concepts in project areas, KISAN has organized microfinance TOT events for DC, PO, BDSO, and CSCs in three districts: Dadeldhura, Surkhet, and Dang. The objective of the training was to enhance the knowledge on concepts, models, and differences between microfinance institutions and banks. The other objective of the training was to train the participants about the system and working modality of financial institutions to better link KISAN beneficiaries to micro credit organizations. A total of 5 I project (DC, PO, BDSO, CSC) staff were trained during the three training events. Following this training, staff have become conceptually clear about microfinance; this has helped them coordinate with MFIs and also helped them mobilize field staff to link beneficiaries with MFIs.

Table XXIX. Status of pre- and post-result of three-day frontline staff TOT on savings, credit, and basic bookkeeping

District/Venue	Test	Total	Participants		Maximum	Minimum	
			Passed no	Failed no.	score	score	Average
Nepalgunj	Pretest	27	8	19	84.5	22.5	43
repaigurij	Post test	27	27	0	97	69	82
Surkhet	Pretest	31	10	21	77.5	15.5	42.7
Surknet	Post test	31	31	0	91.5	55.5	79
Dana	Pretest	25	14	П	75	21	48.9
Dang	Post test	25	25	0	94	55	81.5
Salyan	Pretest	17	5	12	73	26	41
Salyan	Post test	17	17	0	89.5	61.5	75
Pyuthan	Pretest	18	6	12	63	19.5	45
	Post test	18	18	0	93.5	68.5	85
Bardiya	Pretest	13	2	П	68	30	42.8
	Post test	13	13	0	98	78	90
Dadeldhura	Pretest	38	П	27	74	3	42
	Post test	38	38	0	94	58	76

Table XXIX. Status of pre- and post-result of three-day frontline staff TOT on savings, credit, and basic bookkeeping

District/Venue	Test	Total	Participants		Maximum	Minimum	_
			Passed no	Failed no.	score	score	Average
Kailali	Pretest	38	13	25	64.5	8.5	42
	Post test	38	38	0	90	52.5	75
Palpa	Pretest	47	21	26	74	9	46
	Post test	47	47	0	98	59	87
Grand Total	Pre-test	254	90	164	84.5	3	43.71
	Post- test	254	254	0	98	55	81.16

6. VDC SELECTION

As of Y2, KISAN has become fully operational in 336 VDCs in the 20 districts as presented in table below. Offices were established in the West and Mid-West districts in March 2014; activities began thereafter. Activities in the West and Far-West clusters formally begin in February 2014, however the VDC selection process through DADC meetings began in December 2013. VDC selection has been completed in all West and Far-West districts. In the West cluster, a total 81 VDCs have been selected to implement the KISAN activities in Palpa, Gulmi, Arghakhanchi, and Kapilvastu districts. In the Far-West cluster a total of 86 VDCs have been selected in Kailai, Kanchanpur, Dadheldhura, Doti, Accham, and Baitadi districts. In the Mid-West, KISAN works in 169 VDCs in Banke, Bardiya, Surkhet, Dailekh, Jajarkot, Dang, Salyan, Rukum, Rolpa, and Pyuthan. Table XXVII shows the number of VDCs in each of the 20 districts.

KISAN staff has coordinated closely with DADOs to identify KISAN VDCs and to conduct VDC inception workshops prior to project implementation. We expect to hit our targets based on the populations of the VDCs. To finalize the VDCs, KISAN staff met with DADOs and DADC members to ensure that the AFSP will not work in the same VDCs. There are a total of 14 municipalities in the 20 KISAN districts; KISAN will work at the VDC level in all districts, and only have activities in one municipality (Amargadh) in the Far-Western district of Dadeldhura. This is per the DADC's request. See Table XXXII for a complete list of the KISAN working districts and final VDC list.

Table XXX. KISAN working districts and VDCs

District	No. of VDC	VDCs			
Far-Wester	n Region				
Achham	10	Mastamada, Nawathana, Baijanath, Kalika, Janalikot, Bardadevi, Birpath, Kukia, Chalsa, Bhuli,			
Doti	10	Barpata, Kaphalleki, Sanagaon, Mubara, Barchhen, Mannakapadi, Tijali, Gaihragau, Kalikasthan, Mahadevsthan			
Dadeldhura	12	Rupal, Koteli, Jogbudha, Bagarkot, Ashigram, Ganeshpur, Mastamandu, Amargadhi, Ajayameru, Samejee, Kailaalamandu, Manilekh			
Kanchanpur	14	BaisiBichawa, Beldandi, Chandani, Dekhatbhuli, Dodhara, Kalika, Krishnapur, Laxmipur, Parasan, RaikawarBichawa, Rampur Bilaspur, Sankarpur, Sreepur, Tribhuwanbasti			
Mid-Wester	n Region				
Banke	25	Bageswari, Bankatawa, Bankatti, Betahani, Chisapani, Gangapur, Hirminiya, Holiya, Kalaphanta, Kamdi, Katkuiya, Khajurakhurda, Kohalpur, Laxmanpur, Matehiya, Narainapur, Naubasta, Puraina, Puraini, Radhapur, Rajhena, Raniyapur, Samserganj, Sitapur, Udayapur			
Western Re	gion				
Argakhanchi	18	Khandaha, Bagi, Khan, Argha, Dharampani, Bhagawati, Chhatraganj, Thulopokhari, Sandhikharka, Wangla, Dhikura, Khanchikot, Narpani, Jukena, Sitapur, Thada, Dhatibang, Khidim			
Palpa	21	Rampur, Chirbungdhara, Khasauli, Khaliban, Pokharathok, Deurali, Galdha, Chidipani, Bauthapokharathok, Dargha, Pipalgada, Argali, Gadakot, Chappani, Masyang, Gegha, Nayarnamtles, Telgha, Gundi, Timure, PalungMainali			
Kapilvastu	Shivapur, Birpur, Bahadurganj, Dhankauli, Mahuwa, Maharajganj, Kajarahawa, Hardauna, Tilaurakot, NIglihawa, Kopawa, BaiduliGorihawa, Basantapur, Somdiha, Singhokhor, Labani, Bijuwa Pipara, Abhiraw, Pakadi, Dharmapaniya, Nandnagar, Patariya, Fulik				

(Phulika), Gauri, Dohani

VDC inception/interaction workshop

Table XXXI. District-wide VDC inception workshop

птеорион могколор				
District	No. of VDCs			
Far-Western Region	49			
Achham	10			
Baitadi	7			
Dadeldhura	6			
Doti	6			
Kailali	10			
Kanchanpur	10			
Mid-Western Region	97			
Banke	18			
Bardiya	12			
Dailekh	7			
Dang	15			
Jajarkot	5			
Pyuthan	9			
Rolpa	7			
Rukum	7			
Salyan	10			

Surkhet	7
Western Region	30
Arghakhanchi	6
Gulmi	6
Kapilbastu	10
Palpa	8
Total	176

KISAN staff conducted VDC-level orientation and inception meetings in each of the new districts prior to beneficiary selection/farmer group formation to coordinate with VDCs at the grass root level and to identify possible areas for leveraging. During the meetings, KISAN staff briefed participants on KISAN's goal and objectives and requested VDCs to work together for the commercialization of agriculture in their VDCs. Generally it was observed that the KISAN Project was welcomed in all project VDCs by the local bodies and agreed to identify possible areas for partnership between KISAN and VDCs. The meetings were organized in chairmanship of VDC secretary with participation of political leaders and leader farmers and

other VDC based organizations representatives. During these events, the district teams presented the KISAN goal and objectives and identified possible areas for partnership with the VDCs. See Table XXXIII for the number of VDC inception workshops per district.

7. WIKISAN MONITORING SYSTEM

M&E training and activities

WIKISAN location applications version (3.0) was deployed in June 5 2014, more than 137 users have been provided access in WIKISAN for data entry and to manage the process in the districts. Data entry is ongoing: to date 1,821 groups, 7,066 trainings, and 35,772 individuals have been entered in WIKISAN.

In Y2, KISAN has developed and rolled out WIKISAN in all 20 districts. WIKISAN trainings were conducted in the Mid-West, West, and Far-West clusters. The objective of the training was to orient district staff to the WIKISAN system and to provide hands-on training to enter real time data from project districts. Along with the M&E training, the staff was trained to use GPS to collect location-based data, and was provided with basic GIS skills. Altogether more than 89 field staff received the hands-on training to enter geo-enabled data into WIKISAN system. In June, M&E staff visited the Rapti cluster (Dang, Pyuthan, Rolpa, Rukum, and Salyan districts) and trained more than 35 interns and staff in WIKISAN, supervision of M&E filling system, and field visits. M&E staff visited the Mid- and Far-West districts to monitor records are properly documented, observe the field activities, and provide refresher training in WIKISAN.

WIKISAN launch

On June 25, 2014 the WIKISAN launch meeting was held to introduce KISAN M&E system to USAID and FTF implementing partners. WIKISAN is a PHP based interactive monitoring and evaluation database system to track training and outcomes to evaluate the program's impact. It is a

single-entry online data entry and reporting system that can be used to track, analyze, document, and evaluate multi-tier data of the project beneficiaries. The WIKISAN, being built and managed by local software developers, has provisions for instant access queries, real-time reporting, and programmable monthly, quarterly and yearly reports on project activities.

USAID, Home Office, COP, managers, districts staffs, and partners can access and use WIKISAN as report and management tool. Similarly, any programs/projects that are working with organizations and groups, and provide trainings to beneficiaries can adapt WIKISAN as their central data entry and reporting tool. The objective of WIKISAN is to have a web database application that allows for an online data entry, retrieval, and reporting platform for monitoring KISAN field implementation through interactive and real-time exchange of information. This program works as a primary source of data for developing progress reports quarterly and/or need-based reports. The database is an ultra-thin platform to ease data entry from remote locations with poor internet connectivity.

Major features of WIKISAN are as follow:

- User-friendly interface compatible to low-bandwidth internet facilities from remote corners of the country.
- Capability to capture, archive, retrieve information from up to 134,000 project beneficiaries, segregated by gender, intervention types, and implementing partners. Beneficiaries are tracked by project supports received; relationships with other groups/institutions, village committees, value chain organizations, and local government bodies; and by income of the beneficiaries.
- Capability of having different array of data analyses and can generate component-based results as well as quarterly and annual achievements for relevant monitoring indicators.
- The web-based M&E system is simple yet very fast, efficient and easy to use and is effective (for both entry and monitoring) that contains searchable information on Organizations (Partners, Groups and Consultants), Individuals (Employees, Participants and Contributors), Leverages, and Activities in the field.
- Secure password protected system to allow safe authentication. Different level of access to the web-based database has been ensured for donors, project managers, database administrators, implementing partners, and field data entry staff to enable them to entry data and to track programs, activities and evaluate performance indicators and impacts.

GIS and database system

The GIS Expert is in the process of maintaining geo-enabled database system for all KISAN activities and progress. Data collected from the field are geo-tagged with GPS and entered into WIKISAN monitoring system. The WIKISAN data is imported to Geodatabase weekly and updated

maps are produced and shared with relevant staffs. Recipients' and groups' information are collected up to the VDC and ward level, whereas, precise location information (using GPS) are collected for collaborative organizations, agrovets, demonstration sites, assets creation, and any leverages carried out in the field. Similarly, location information is also collected for infrastructure and other outputs that could impact results. Training on GPS handling techniques have been provided to officers from all 20 districts who are regularly updating location information to WIKISAN system.

GIS and WIKISAN training

GIS Expert and M&E coordinator conducted four two-day 'GIS and WIKISAN trainings' in Feb/March 2014 for staffs in the ten Mid-West districts. Similarly, two one-day 'GIS and WIKISAN Orientation' were conducted in May 2014 to the staffs from the West and Far-West districts. The trainings were aimed to enable field based staff to collect and enter M&E data into an online database system. The staff were introduced to web-based data entry system (WIKISAN), trained to use GPS for collecting location based data, and were provided with basic GIS skills. More than 80 field staffs from all 20 KISAN districts received the hands-on training and were advised to enter geo-enabled data into WIKISAN system. Introduction of WIKISAN has enabled a decentralized data entry system to an efficient centralized data server.

8. INTERNSHIPS

M&E interns

In the KISAN M&E system, each activity and training needs to be entered into the WIKISAN database. M&E data collection forms for individuals, groups, activities, and organizations are printed out and filled in. This data then needs to be entered into WIKISAN. In view of expediting the data entry process, and avoiding excessive use of staff time in managing the system, KISAN has hired 15 M&E interns to support M&E and other activities. District and regional staff have trained these M&E interns to enter the real time data properly. The internship program seeks to build the professional capacity of disadvantaged youth graduates. Most of these M&E interns are women and from marginalized groups from project districts.

Effectiveness of KISAN demonstrations

KISAN is conducting an internship assignment with a graduate student from the University of Berkley to identify challenges of adoption and necessary improvements to increase efficiency. The assignment will involve: Impact study of technology adoption; Evaluation of adoption rates in different demonstration sites; Identifying gaps and challenges for the variation in adoption rates with same replication of demonstration techniques; and Identification and recommendations for necessary improvements tool to increase adoption efficiency.

Cost of production at the farm level

In Y3, KISAN has also carried out an internship with an undergraduate student at the University of Minnesota to assess the cost of product at the farm level for the KISAN crop categories. The assessment is ongoing from June-July 2014, and is being carried out in 86 farming households in Banke, Surkhet, and Dang.

9. TRIPS AND SIGNIFICANT MEETINGS

Access to finance

In coordination with DEPROSC, the KISAN team has finalized the KISAN approach to the access to finance activities. The DIP and Statement of Work (SOW) have been developed, and the budget for Y2has been approved. The access to finance-related DIPs has been developed and is in the process of being finalized.

IPM observation visit

In the two-day visit from March 13-14, 2014, KISAN organized an observation visit program for more than 20 scientists/experts officials from various institutions visited the sites, including USAID/Nepal, USAID/Tajikistan, USAID/Washington DC, IPM-IL, BFS/ARP/Research, USAID BFS/ARP, Fintrac, USAID BFS, Insight Systems Corporation/USAID Bureau for Food Security, Insight Systems Corporation/USAID, US Tufts/Nutrition Innovation lab/HKI, AVRDC Taiwan, Center for Large Scale Social Change (CLSSC), and Virginia Tech.

Home office support

Two Winrock staff visited and supported the KISAN Project staff at no expense to the project. Ron Hubbard visited the project and met with USAID staff to ensure the project was progressing in a positive manner and to identify ways to increase activities. Home Office Coordinator, Erin Hughes, visited the KISAN office in the last week in March and met with the USAID program team to learn about USAID's interest in KISAN having a stronger market-based approach (see Annex VI for trip report).

KISAN highlighted in Partnering with Innovation Labs: April Ag Sector Council

The April Ag Sector Council Seminar featured a discussion of the Feed the Future Innovation Labs for Collaborative Research, including the role of the KISAN project and the collaborative effort with the Innovation Lab to meet the Feed the Future Research Strategy, which supports research and development to improve smallholder agriculture in a changing climate by promoting sustainable agricultural intensification through three research themes: advancing productivity, transforming key production systems, and improving nutrition and food safety.

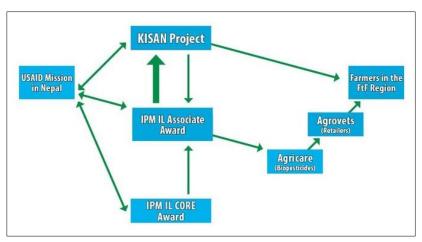


Figure 25. KISAN's partnership with Innovation Labs

For further details, see the following blog: <a href="http://agrilinks.org/blog/partnering-innovation-labs-april-ag-sector-council-recap?utm_source=USAID+Bureau+for+Food+Security+%2F+Agrilinks&utm_campaign=f22023bcdf-May6%2C2014_eUpdate&utm_medium=email&utm_term=0_8f8d227958-f22023bcdf-56674471_eupdate&utm_medium=email&utm_term=0_8f8d227958-f22023bcdf-56674471_eupdate&utm_medium=email&utm_term=0_8f8d227958-f22023bcdf-56674471_eupdate&utm_medium=email&utm_term=0_8f8d227958-f22023bcdf-56674471_eupdate&utm_term=0_8f8d227958-f22023bcdf-56674471

B. KISAN PROJECT AMENDMENT AND MODIFICATION

Since May 2013, USAID has requested four modifications of the KISAN Contract the first three with respect to Component B activities and the last concerning Component A.

Three modification requests were made by USAID in June, August and October 2013 by USAID. Winrock complied with these requests and submitted documents, the last, as requested by USAID, working with Helen Keller International. In December 2013 USAID notified Winrock that the Nutrition/WASH component would no longer be a part of KISAN. On December 14, 2013 the COR reiterated that Component B would be dropped from the contract and that Winrock should give notice to NPCS and NEWAH that we would be terminating their contract. This development has had direct impacts on beneficiary selection and activity planning in the project districts.

Based on discussions and documentation provided by Winrock the KISAN Contract was formally amended in late Y2 on June 27 through a formal Modification (4) document which both USAID and KISAN have signed and endorsed. This document officially removed the nutrition and WASH components from KISAN and added additional activities for agriculture components and brought the funding for KISAN back to original levels.

Additionally, Winrock learned that USAID's Suahaara Project will be working in four KISAN districts (Baitadi, Doti, Accham, and Dadheldhura) to improve nutrition and sanitation practices. The KISAN and Suahaara COPs are coordinating closely for smooth rollout of Suahaara's nutrition and sanitation interventions in KISAN beneficiary communities.

C. CONTRACT DELIVERABLES

As of March 2014, Winrock has finalized and submitted all the deliverable documentation for project implementation as required by the contract. Winrock has modified most of the deliverables to reflect the changes in KISAN activities.

D. WINDOWS OF OPPORTUNITY GRANTS UNDER CONTRACT

Towards the beginning of Y2, KISAN developed and submitted for USAID approval a Grants Manual. The manual describes the policies and procedures for implementing the grants program and how priority areas will be determined, potential partners identified, and the grant activities selected. KISAN grant activities will be targeted for business promotion and expansion of private sector, and foster innovative market-led approaches. With consultations with the COR, KISAN has identified some potential sectors for the grant activities, including activities for livestock breed improvement activities through private sector, enhancing private sector seed companies role in cereal seed production, promotion of warehouse receipts for cereals and lentil and increasing access to irrigation and promotion of agriculture mechanization.

For Y2, KISAN GUC focused on livestock and agriculture mechanization activities. KISAN released an Expression of Interest on "Breed improvement of large ruminants (cow and buffalo) through artificial insemination" for promoting private sector artificial insemination services in Kapilvastu, Dang, Banke, Bardiya, Kailali, and Kanchanpur districts. The 18 month grant is targeted for private enterprises, business associations, cooperatives and associations, non-government organizations, and autonomous organizations, and the expected budget was \$15,000 per Al center. In response to the EOI, around 21 applications were received, of which the KISAN Grant Advisory Committee (GAC) selected three applications which are being processed for award.

A Request for Application was also issued for the promotion of agriculture mechanization in Kanchanpur, Kailali, Bardiya Banke, Dang, Kapilvastu, Dhadeldhura, Surkhet, and Palpa through demonstrations and trainings on a range of mini tiller, 2-wheel and 4-wheel tractor attachments, and facilitating the availability and repair services for these machineries in district sales centers. The grant with estimated budget of \$10,000 per district will promote mechanization in rice, maize, and lentil. The KISAN GAC is evaluating and requesting revisions to finalize the applications. Preparations are also ongoing for the release of upcoming RFAs on promoting agriculture mechanization through functional supply chain of small farm equipment and promotion of warehouse receipts and embedded services.

IV. ANTICIPATED FUTURE PROBLEMS, DELAYS, CONDITIONS, AND CONSTRAINTS THAT MAY ADVERSLEY AFFECT THE IMPACT OF THE PROGRAM

Since May 2013, Winrock received four different draft modifications and requests for proposals, comments or budgets, from USAID. The first three of these were in regards to clarifications and modifications of the nutrition and WASH component of the project. The last modification signed on June 27, 2014 officially eliminated the nutrition component, added additional agriculture activities and brought KISAN back to full funding.

Because of the large number of modifications and lack of clarity concerning Component B throughout much of Y2 KISAN was cautious in moving forward to create district-based coordination bodies, select VDCs, or select beneficiaries. The combination of responding to requests from USAID and clarity about program direction during much of the year resulted in project delays, greater home office coordinator time and travel, and an overall slower burn rate of the budget. In addition, USAID requests to hold off on grant activities until late in Y2 and requests to delay building the capacity of other organizations also slowed burn rates.

With the resolution of Component B activities n the last quarter of Y2, the KISAN team has rapidly moved forward implementing Component A, significantly improving burn rates and expanding activities without worrying about potential nutrition integration concerns.

Hiring and staff retention has slowed implementation. KISAN is working in an extremely competitive hiring environment and is trying to hire competent district based field staff. We are faced with a lengthy approval processes as compared to the competitors. In addition, staff and LSPs that have joined and received KISAN training are attracted away by other employment opportunities. The staff time involved in recruiting, interviewing and preparing staff has exceeded what was planned. As new projects (GAFSP, FFP, etc.) come to the Mid- and Far-West KISAN will be forced to continue to invest significant resources in recruiting, hiring, and training staff.

In Dailekh and Jajarkot, rain and hail storms during the second week of March have affected standing crops (vegetables and cereals), destroying about 30% of crops (as reported by the World Food Program). The storms affected KISAN working VDCs including Bindhyabasini, Paganath, and Dadaparajul VDCs in Dailekh and Khagenkot in Jajarkot.

V. SECURITY ISSUES

There has been a great deal of political activity in in the early part of Y2 because of the political upheaval and elections. Apart from interfering with field schedules, there have been no direct long-term adverse impacts on the project. The month leading up to the national elections on November 19, 2013 was politically unstable with numerous strikes called by opposing parties. There were a total of 12 days of nationally and

locally declared strikes between October and November 2013, but not all affected project districts. GON declared a public holiday on Election Day with no vehicular movement from 7:00am to 7:00pm. The rest of the year has been stable in all 20 districts. See Annex V for additional information on security issues in Y2.

Table XXXII. KISAN Security Reporting

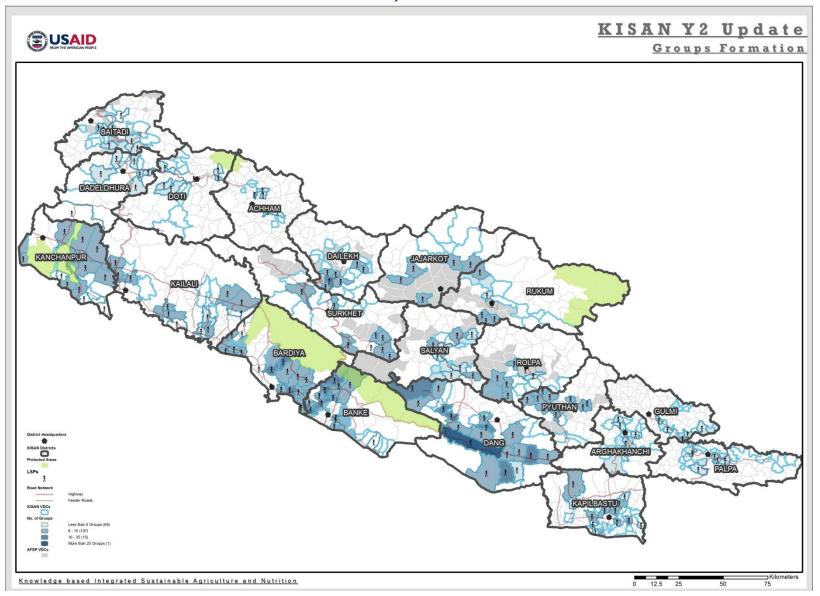
Date	Region	District	Description	Risk Level
		ACCHAM	Security situation is normal during this reporting period. Transportation was not obstructed. All the activities had been done properly in the district.	
		Doti	Overall scenario of district was normal (sensitive and salient). According to District Police Office and District Administrative office Doti there was no any security issues.	
October- 2013-June, 2014	Mid- Western	Bheri cluster	All the things were gone normal in the district during the period	Low

VI. ENVIRONMENTAL IMPACT

As part of KISAN's Initial Environmental Examination (IEE), the project developed a Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP) that outlines currently used agrochemicals, or those that may be used in the future in early Y2. Through the year, Winrock has made several resubmissions in the reporting quarter following USAID feedback, and is currently making final adjustments to the document submitted on April 1, 2014 based on comments received on April 8.

KISAN is already reinforcing the importance of safe pesticide use to staff and project beneficiaries. In this respect, KISAN has printed out double-sided pocket-sized laminated cards that list the pesticides recommended to be permitted in the KISAN Project on one side, and recommended clothing when using pesticides on the other.

ANNEX I. KISAN GROUP FORMATION, Y2



ANNEX II. PARTNERSHIP STATEMENT





नेपाल सरकार र अमेरिकी सहयोग नियोगको सहकार्यमा नेपालको खाद्य तथा पोषण सुरक्षा सुदृढीकरण कार्यक्रममा सहयोग प्रचाउन KISAN परियोजना कार्यान्वयनको शुभारम्भ गरियो।

८ श्रावण, २०७०

The Government of Nepal and The United States Agency for International Development agree to implement the Knowledge-based Integrated Sustainable Agriculture and Nutrition (KISAN) project, February 14, 2013 to February 13, 2018, to support Nepal's nutrition and food security improvement agenda.

July 23, 2013

Ms. Sheila M. Lutjens Acting Mission Director USAID/Nepal

Dr. Praveen Mishra

Secretary

Ministry of Health & Population Government of Nepal

Mr. Jaya Mukunda Khanal

Secretary

Ministry of Agricultural Development Government of Nepal

ANNEX III. PRESS RELEASE

PRESS RELEASE

JULY 23, 2013

Two New Agriculture Initiatives to Reduce Poverty and Hunger across Western Nepal

The Government of Nepal's Ministry of Agricultural Development (MOAD) and Ministry of Health and Population (MOHP) have launched two separate food security initiatives in the west, mid-west, and farwest regions. The Agriculture and Food Security Project (AFSP) and the Knowledge based Integrated Sustainable Agriculture and Nutrition Project (KISAN).

AFSP is a five-year project which will be implemented by the Government of Nepal line ministries. The project aims to improve food security situation of 150,000 households of poor and marginal groups by increasing agricultural production, increasing livelihood options and household income, and improving utilization of food.

KISAN is funded by USAID-Nepal and will improve food security, increase income, and diversify diets for 160,000 disadvantaged rural households, or about one million rural Nepalis, across 20 districts in the West, Mid- and Far-Western regions through integrated agriculture and nutrition activities. Noting the close collaboration between the Government and partners such as USAID and the World Bank, Chief Guest, Mr. Tek Bahadur Thapa, the Honorable Minister of Agricultural Development and Forestry and Soil Conservation officially introduced the two projects and outlined the role of the initiatives in reaching Nepal's agriculture, nutrition, and sanitation goals.

Chair of the Program, Honorable Vice Chair of National planning Commission, Dr. Rabindra Kumar Shakya mentioned that the recently approved Multi Sector Nutrition Plan and recently prepared Agriculture Development Strategy will guide the future direction of agriculture, food and nutrition security of Nepal. He emphasized the need of increased investment and the coordination for the development of these sectors. Dr. Praveen Mishra, Secretary for Ministry of Health and Population expressed his commitment to coordinate and facilitate to implement these projects of national importance.

Secretary for Ministry of Agricultural Development, Mr. Jaya Mukuna Khanal highlighted the importance of these projects and importance of coordinated efforts through existing institutions and structure. He also expressed his commitments for the required support from the Ministry for the successful implementation of these projects. Speaking at the event, U.S. Ambassador Peter Bodde, remarked "Both projects reflect the U.S. Government's commitment to food security through President Obama's Feed the Future and Global Health Initiatives. Instead of simply delivering food aid, these Initiatives place Nepal and other countries in the lead to promote inclusive agricultural growth and improve the nutrition of women and children. I applaud the Government of Nepal for identifying their priorities and devising their own plans, which both projects will support."

In addition Ms. Tahseen Sayed, Country Manager of the World Bank for Nepal, touched upon the need for cooperation between the two ministries for the success of this project and reiterated AFSP alignment with government priorities. Under the Chairmanship of the Dr Rabindra Kumar Shakya, the Honorable Vice-Chair of the National Planning Commission, representatives from various GON line agencies, including the National Planning Commission; development stakeholders; and related private sector participants attended the program.

These two projects are both part of larger global programs and are flagship projects in Nepal. Both projects are globally unique in that both the GAFSP/AFSP and FtF/KISAN projects feature integrated agriculture and nutrition approaches to combating food insecurity. Both projects will work in the west, mid-west, and far-west regions, but will be aligned to prevent duplication of activities within districts. Project-specific details:

- 1. The Agriculture and Food Security Project (AFSP). This project is funded by the Global Agriculture and Food Security Program (GAFSP). GAFSP is a global program working in 18 countries with \$1.3 billion in grant funds provided by 9 G20 members and the Gates Foundation. The US is largest single donor to this fund. This program will be implemented by MOAD with support from MOHP, with monitoring and supervision provided by the World Bank. This project aims to improve food security situation of poor and marginal groups of population by increasing agricultural production and productivity, increasing livelihood options and household income, and improving utilization of food. The project has four main components: technology development and adaptation; technology dissemination and adoption; food and nutritional status enhancement and project management. The priority target groups of the project are small and marginal farmers, landless households, indigenous population, and Dalits. The project is to be implemented in 19 hill and mountain districts of the mid- and farwestern development regions of Nepal: Darchula, Baitadi, Bajhang, Bajura, Humla, Jumla, Dolpa, Mugu, Kalikot, Surkhet, Dailekh, Jajarkot, Salyan, Rukum, Rolpa, Pyuthan, Accham, Dadheldhura and Doti.
- 2. The Knowledge-based Integrated Sustainable Agriculture and Nutrition (KISAN) Project is funded by the United States Agency for International Development (USAID/Nepal) and is a part of the Feed the Future (FtF) Presidential Initiative. FtF is a global food security initiative of the US Government working in 19 countries. In Nepal, the KISAN project seeks to sustainably reduce poverty and hunger by achieving inclusive growth in the agriculture sector, increasing income of farm families and improving nutritional status, especially of women and children. USAID/Nepal will implement the project from 2013-2018 in 20 Terai and lower hill districts with Winrock International in collaboration with five Nepali organizations: Antenna Foundation Nepal; Development Project Service Center (DEPROSC); Center for Environmental and Agricultural Policy, Research, Extension and Development (CEAPRED); Nutrition Promotion and Consultancy Services (NPCS); and Nepal Water for Health (NEWAH). KISAN districts are:

Kapilbastu, Palpa, Agarkhachi, Gulmi, Banke, Bardiya, Surkhet, Dailekh, Jajarkot Dang, Salyan, Rukum, Rolpa, Pyuthan, Baitadi, Kailali, Kanchanpur, Doti, Accham and Dadheldhura.





ANNEX IV. YEAR TWO MAJOR EVENTS

District	Event	Purpose	Date/Venue	Participants
		Working with GON to improve food security	July 23, 2013 at	KISAN COP and Staff, Project Director of AFSP, MOAD Joint Secretaries, DG and DDGs of
Kathmandu	KISAN Launch Program	and increase incomes in western, mid-western and far-western region.	Hotel Radisson in Kathmandu	Agriculture, USAID's agriculture and health offices, bank and IT-company CEOs, and General Managers of major agribusinesses. About 100 participants
Banke	KISAN Inception Program	To emphasize how the project will work closely with GON.	July 31,2013 at Kitchen Hut in Nepalgunj	KISAN COP and staff, Ministries, Regional Directors, District level, Development Partners About 80 persons
Pokhara and Dhangadhi	Regional Workshop	KISAN Project brief and discussion, clarification of livestock & agriculture.	September 1, 2013 at Agriculture Directorate office and Livestock Directorate office.	KISAN Staff, Ministry representatives, Secretary, Regional Level agriculture, All agricultural district office including farm
Harre, Chinchu	IPM-IL Tomato Trail Plots	IPM-IL field staff oriented the participating farmers about IPM-IL revalidation in Kalika vegetable producer group tomato plot.	September 3, 2013 at Harre, Chinchu.	KISAN COP, Regional Component A Staffs, USAID team and 40 participating farmers
Gadhi, Surkhet	CSISA rice and maize	To interact with the farmers and observe plant status and	September 4-5, 2013 at CSISA sites	USAID team, KISAN COP, Regional

District	Event	Purpose	Date/Venue	Participants
	trail plots	different treatment of rice varieties.		Component A Staffs
Gadhi and Uttarganga, Surkhet	Exposure Visit to CSISA Sites	To orient the participants and initiate discussions on improved technology/ variety v/s local varieties; local management approaches, and improved recommended rice and maize technologies and techniques.	September 29, 2013 at CSISA Sites	More than 55 representatives from seed cooperatives, seed company, agro vet, crops, KISAN change agents, GON, seed producers, NARC, USAID/Nepal
Nepalgunj	IPM-IL Vegetable Trail Plots	Observation of vegetables and interact with farmers.	September 30, 2013 at Bageshori, Nepalgunj	USAID team, KISAN COP, Regional Component A Staffs
Kathmandu	National Project Advisory Committee Meeting	To strengthen coordination with GON and other stakeholders on project implementation	October 3, 2013 April 14, 2014 at KISAN Office, Sanepa	KISAN COP and Staff; USAID Seed Director; AID project development specialist; MOAD Joint Secretaries; AFSP Project Director; Under Secretaries of MOHP, MOFALD and MOFDG; DGs of DLs and DFTQC; NARC, CEAPRED, AEC
Banke	KISAN Orientation Workshop	To orient project staffs on activities, expected outcomes, financial and administrative systems, M&E and progress reporting	October 27-29, 2013 at Hotel Taj and Hotel Amrit	KISAN COP and staff from Kathmandu and YI districts Around 80 persons
Banke	IPM-IL NARC	To participate in the one-day Tomato	October 2013 at RARS Khajura	KISAN district staffs, farmer

District	Event	Purpose	Date/Venue	Participants
	Tomato Grafting Training	Grafting training organized by IPM-IL and NARC		representatives and LSPs from Dang and Salyan Around 5 participants
Banke	Exposure Visit to CSISA Sites	To interact with the farmers using improved technology and observe plant status and different treatment of rice varieties	October 1, 2013 at CSISA Site, Naubasta VDC	USAID officials, KISAN COP, Component A Staffs, DC, PO, LSPs, agro vets, seed cooperatives/entrepr eneur of Banke, Bardia and Dang Around 20 participants
Rupandehi and Nawalparasi	Exposure Visit to CYMMIT ANEP Project	To observe commercial field and mechanized practices of rice production as DSR, zero tillage and TPR (puddled and unpuddled)	October 2-4, 2013 at CYMMIT ANEP Sites	Agriculture Marketing Manager, Input Supply Manager, DC, PO and SPO of Banke, Bardia, Dang Around 8 participants
Banke, Dang, Salyan and Pyuthan	USAID Visit	To monitor KISAN activities in west and mid-west regions (Banke, Dang, Pyuthan and Salyan).	April 19-24, 2014,	Mr. Navin Hada, Ms. Daniell Knuepple, Ms. Binita Rai, Mr. Sanjay, COP, SRM, CAT Manager and District Staff
Surkhet, Dang and Kapilbastu	KISAN Project Coordinator Visit	To monitor KISAN activities in west and mid-west regions	May 21-24, 2014	KISAN Project Coordinator, SRM
Banke	Mission Economist and USAID Chief Economist Visit	To monitor and observe farmers group, activities and MPCs	May 31, 2014	Dr. Andrew J Nelson (Mission Economist), Dr. Stephen O'Connell (USAID Chief Economist), SRM, DC, APO

District	Event	Purpose	Date/Venue	Participants
Rapti Cluster (Dang, Rukum, Rolpa, Pyuthan, Salyan), Bheri Cluster (Bardia, Surkhet, Dailekh) West Cluster (Arghakhanchi, Gulmi, Palpa, Kapilbastu) Far-West Cluster (Accham, Kanchanpur)	Participation in "National Rice Day" with DADO team	Coordinate with District Agriculture Development Office; support the regular program organized by the government agencies; Promotion of improved seed variety of rice, planting technology and awareness	June 29, 2014	CDO, LDO, DADO/SADO, DSP, Government officers, Chief of National Farmer's Association, JT/JTAS, farmers, etc. KISAN Cluster Manager, DC, APO, BDSO, AT, VDCC
Kapilbastu, Doti, Kanchanpur, Rukum, Salyan, Banke, Bardia	Participation in "District Agriculture Fair/Exhibiti on"	To disseminate new Agri. based technology & idea sharing to each other among commercial farmers/entrepreneurs, agents/worker, Agri. Exports and also to clarify the working modalities & role of USAID/KISAN Project	February 26-27, 2014; Dipayal Bazar, Doti Feb 21-22, 2014; Kanchanpur May 8-17, 2014; Kapilvastu January 12-14, 2014; Khalanga, Rukum December 30- January 1, 2014; Srignagar, Salyan February 2-March 3, 2014; Kohalpur,Banke Feb 3-5, 2014, Guleria, Bardia	DADO, FNCCI, KISAN district team, different line agencies and stakeholders
Banke	Participation in "7th National IPM Fair in Kohalpur	To disseminate new Agriculture based technology, Integrated management technology & idea	January 19-22, 2014, Kohalpur, Banke	KISAN and IPM team

District	Event	Purpose	Date/Venue	Participants
	Haat Bazaar"	sharing to each other among commercial farmers/entrepreneurs, agents/worker, Agri. Exports and also to clarify the working modalities & role of USAID/KISAN Project		
Accham, Kanchanpur, Dang	Participation in "VDC Agriculture Trade Fair"	To disseminate new Agri. based technology & idea sharing to each other among commercial farmers/entrepreneurs, Research & extension agents/worker, Agri. Exports and also to clarify the working modalities & role of USAID/KISAN Project	February 27, 2014- Baijanath VDC, Accham May 21, 2014- Dodhara VDC Kanchanpur February 26-27, 2014 Dharna VDC, Dang January 12-14, 2014, Mushikot, Khalanga February 25, 2014, Tharmare VDC, Salyan	DADO/SADO, representation from stakeholders, KISAN team
Kailali	Contact Group Meeting	Coordination and sharing	June 27, 2014, UNDP-CPP Office, Dhangadi	UN Agencies (UNFCO, UNFPA, UNWOMEN, UNDP-CPP, UNDP-ESP); INGOs (Care Nepal, Save the Children, Mercy Corps, Plan International Nepal, World Vision, LWF Nepal, Bildon Nepal) Donors/Projects (USAID-Sajhedari, USAID-KISAN, DFID/GIZ-RMO, LGCDP, LGCDP-HDSPP, NCCSP,

District	Event	Purpose	Date/Venue	Participants
				MEDEP, KOICA/NHISP)
Kailali	Scoping Visit Workshop	Inception and Sharing about BRACED program	June 21, 2014; Sathi Hotel, Dhangadi	DADO,DLSO,DDC, DIO,UN-NCCP Program, IDE, World Vision, LWF Nepal, USAID/KISAN,SAPR OS
Arghakhanchi	DDC Integrated planning and DDC council meeting	Submitted Y2 DIP and presentation of KISAN approach	February 2014	DDC and Gov. offices
Arghakhanchi	District Visit by Senior Regional Manager	District supervision Interaction with farmers group and field visit; Coordination meeting with Local Development Officer (LDO), DDC, Arghakhanchi, Senior Agriculture Development Officer and agriculture office, DADO, Arghakhanchi and MPC, Sandhikhark	May 24 to 26, 2014; Sandhikhark, Narpani, Khanchikot	SRM ,KISAN Project, LDO, and Extension Officer, JT, Farmers/beneficiaries , MPC Chairmain and Securaty, DC and APO, Arghakhanchi and field staff
Arghakhanchi	District Visit by Chief of Party, Deputy Chief of Party, Business	District supervision Interaction with Leaders farmers and farmers group and field visit of farmers field, LSP vegetable field and interaction and	June 18, 2014, Sandhikharka, Narpani,	COP, DCOP, BCD and SRM, KISAN beneficiaries and LSPs

District	Event	Purpose	Date/Venue	Participants
	Contact Director and Senior Regional Manager	suggestion District KISAN Office Visit and observation.		
Gulmi	District Visit by Chief of Party, Deputy Chief of Party, Business Contact Director and Senior Regional Manager	To know activities of KISAN Gulmi and rapport building with DDC and DADO	June 17, 2014 Ridi CC, Gaudakot, DDC, DADO	Chief of Party, Deputy Chief of Party, Business Contact Director and Senior Regional Manager
Palpa	Opening Ceremony of LSP, four days TOT training	To brief RD on KISAN program and opening ceremony of TOT training to LSP - I	June 17-20, 2014, Hotel the white lake palpa	RD from Pokhara, COP, DCOP, BCD, SRM, Cluster managers, Capacity development manager and 27 LSPs of Gulmi, Arghakhachi , Palpa and Kapilbastu district.
Dailekh	Visit to DDC, DADO, DHO, Agrovet, and interaction with farmers group	Coordination and sharing	September 4, 2014	Chief of Party, Senior Regional Manager, Manager, DC and ENA/EHA officer from KISAN Team.
Dailekh	Celebration of family farming year organized by	To share about the farming system and family farming in Dailekh and its	July 7, 2014	DADC member, DFSM DC participated

District	Event	Purpose	Date/Venue	Participants
	DADO	opportunity		
Kanchanpur	Workshop with National Farmers' Association	Support for group formation and registration, leveraging, resource mobilization, assists (lease hold farming, group farming, seed production, marketing, saving & credit group, linkage with district and central government line agencies, proposal writing, etc) and participation with KISAN project activities	I) April 25, 2014 Dodhara VDC office 2) May 19, 2014 Laxmipur VDC Office	Local stakeholders, representatives from I/NGOs, Political Parties, ASC, DLSO, VDC secretary, Farmers' Group, Agri-Coops, Saving and Credit, and MFI.
Kanchanpur	Workshop with National Farmers' Association	Program Sharing, Coordination and collaboration with Local stakeholders	June 27, 2014 UNDP-CPP Office, Dhangadhi	UN Agencies (UNFCO,UNFPA, UNWOMEN, UNDP-CPP, UNDP-ESP); INGOs (Care Nepal, Save the Children, Mercy Corps, Plan International Nepal, World Vision, LWF Nepal, Bildon Nepal) Donors/Projects(US AID-Sajhedari, USAID-KISAN (Kailali and Kanchanpur), DFID/GIZ-RMO, LGCDP, LGCDP- HDSPP, NCCSP, MEDEP, KOICA/NHISP)
Kanchanpur	Participation in DDC	Participation in District, VDC and Local level program finalization for	March 10, 2014 Mahendranager	DDC, LDC, VDCs, DADO, Political Parties, General

District	Event	Purpose	Date/Venue	Participants
	Council	the budget allocation		Public, Media, Business People, Local Stakeholders, I/NGOs, NGO Federation, USAID/KISAN
Kanchanpur	Coordinatio n and collaboratio n with UN Agenices on BRACED Project	Feasibility Study of BRACED project and field visit to Daiji VDC, Champur for situation analysis and observe rice demo plot of USAID/KISAN	June 18, 2014 Opera Hotel, Mahendranagar	Representatives from UN Agencies (UNFCO,UNFPA, UNWOMEN, UNDP-CPP, UNDP-ESP); INGOs (Care Nepal, Save the Children, Mercy Corps, Plan International Nepal, World Vision, LWF Nepal, Bildon Nepal) Donors/Projects(US AID-Sajhedari, USAID-KISAN (Kailali and Kanchanpur), DFID/GIZ-RMO, LGCDP, LGCDP-HDSPP, NCCSP, MEDEP, KOICA/NHISP,)

ANNEX V. YEAR TWO SECURITY REPORTING

Date	Region	District	Description	Risk Level
July 2, 2013	Mid-West	Bardiya	Banke District bandh, Karnali river flood victim struggle committee from Rajapur VDC.	Low
July 11, 2013	Central	Bhaktapur, Kavre, and Sindhupala nchowk	Local communities of the districts of Bhaktapur, Kavre and Sindhupalanchowk of Central Regions jointly called a bandh (general strike) protesting against the government decision of road expansion in the districts.	Low
August 1-2, 2013	Central	Chitwan	Chitwan District bandh, UCPN Maoist youth wing, Young communist league (YCL), demanding to release its arrested cadres in connection to extorting money from Local business people in the name of conducting their district level assembly in Narayangadh.	Low
August 8-9, 2013	Central	Chitwan	The Chitwan district bandh by Tarun Dal has been withdrawn after an agreement with local authority to release their cadres. The demonstrators are organizing corner meetings in the major parts of the city.	Low
September 12, 2013	Central	Kathmandu	Kathmandu Valley bandh, Alliance of 33 parties led by CPN- Maoist Mohan Baidhya has Scheduled strikes and Protest.	Low
November I, 2013	West, Mid- West, Far-West		CPN-Maoist called a bandh in the Western, Mid-Western, and Far-Western Region (Magarat, Abadh, Tharuwan, Bheri-Karnali and Seti-Mahakali states) aiming to obstruct the election campaign visit of UCPN-Maoist top leaders.	Low
November 2	Mid-West	Surkhet	CPN-Maoist called a bandh in Surkhet aiming to obstruct the Election Campaign visit of UCPN-Maoist Chairman and other leaders.	Low
November 11-20	Nation-wide		The alliance of 33-political parties led by by CPN-Maoist announced a general strike (Nepal bandh) from 11 to 20 November to stop the upcoming CA poll. The CPN-M is	Medium

Date	Region	District	Description	Risk Level
			under pressure from different sectors to withdraw or reschedule the bandh.	
November 13	Central	Kathmandu	Eight people were injured by a petrol bomb blast at a micro bus in Samakhusi. Two more IEDs were found in that area.	Low
November 19	Nation-wide		Election day (national holiday).	Low
March 19, 2014	Central region	Kathmandu	The agitating student alliance called Kathmandu Valley bandh due to hike in petroleum price by 55%.	Low
June 22, 2014	Far-West	Kailali	One day Bandh on 22 nd June, 2014 on district election.	Low
January-June, 2014	Mid-West, Far- West, West	All 20 districts	Everything is normal in all districts during reporting period.	Low

ANNEX VI. TRIP REPORTS (Q4)

Trip Report

Traveler: Erin Hughes

Dates of Trip: May 8 – June 4, 2014

Places Visited: Kathmandu, Nepal

Purpose of the trip: The primary purpose of the trip was to provide support to the staff in developing

Year 3 (Y3) workplan.

Outcome of Visit:

• Provided training to staff and partners on managing for results

- Worked with partners and staff to develop Y3 Workplan
- Developed draft RFAs for introducing warehouse receipts
- Drafted TORs for assessing vegetable markets in training farmers, and value chain consultant
- Drafted TOR and helped mobilize seed expert (Gurbinder Gill) to serve a F2F volunteer under KISAN to improve the seed sector
- Met with and guided Dr. Gill on his assignment
- Conducted Partners' meeting
- Visited Surkhet, Kapilbastu, and Dang and learned about issues farmers are facing and the benefits of KISAN.
- Met with John Stamm and Navin Hada of USAID
- Participated in presentation by research team exploring index insurance in Nepal

Trip Report

Traveler: Dr. Gurbinder Gill

Dates of Trip: May 25 – June 6, 2014

Places Visited: Kathmandu and West districts

Purpose of the trip: Dr. Gurbinder Gill, Seed Expert, was fielded to assess the seed situation in project areas, and to identify opportunities to strengthen seed companies. The specific objectives of the assignment were to increase knowledge on entrepreneurship development, marketing channel, and branding specifically for seed enterprises; and to assess the current situation and suggest a cross stakeholders approach towards strengthening the private seed sector in Nepal.

Outcome of the trip:

The study highlights private seed sector enhancement by facilitating development of the value chain actors.

Dr. Gill has advised seed companies on how to increase revenue, production and sales. He has recommended to companies how to market and brand their seeds, identified training needs of agro-vets and suggested business strategies for the key players.

Seed assessment indicates the following issues and challenges to the seed sector growth:

- Programs that impact varietal development and maintenance of the newly released varieties in cereals and lentils are very limited. There are many new varieties available in the market and farmers know very little about theses varieties.
- The quality of available cereal seed has been deteriorating, prompting farmers to switch to
 hybrid seeds. The main reason for quality deterioration has been identified as lack of quality
 supervision and control during the production process, and unavailability of quality foundation
 seeds.
- Poor post- harvest activities: Most of the seeds produced sold in the markets or sold to the seed companies are hand cleaned, sun dried, and packed in jute or polythene bags.
- No companies are involved in production activities. Many of the agro-vets in the project districts are family-owned or operated by a single person. Awareness is lacking at the farmer level, they are neither aware, nor very concerned, about maintaining market quality standards.
- Hybrid seed production program activities being carried out by public and private seed
 companies is very little, although there are huge prospects for seed companies to start hybrid
 seed production business as farmers are gravitating towards the use of hybrid seeds.
- The sudden change in government policy on implementation of commodity mission programs (like maize, wheat, and lentil mission program) in the districts has affected the availability of foundation seed for seed production.

ANNEX VII. SUCCESS STORIES

BETTER VEGETABLE PRODUCTION TECHNOLOGY INCREASES SMALLHOLDER INCOMES

Pagnath VDC, Dailekh



Figure 1. After joining a KISAN farmers group, Min learned about improved technologies and built a plastic house on his land to grow high-value vegetables

Min Kumar Khatri is a 23 year old farmer who lives with two family members in Pagnath-9, Hulaktakura, Dailekh district. Min has four ropani of farm land on which he grew maize, wheat, and rice. His family could subsist for only half of the year on the food they grew; for the rest of the year, they had to purchase food from a nearby market. Food costs ate into their limited income. Then Min joined a KISAN farmers group in his village and participated in agriculture trainings on new techniques and technologies for vegetable production. Min started improved varieties on part of his land and sold 130 kilograms of cucumbers and 140 kilograms of bitter gourds

(grown in the plastic house/tunnel) at a nearby marketing earning NPR 20,000. "This helps to change my livelihood," Min said, "I think vegetable farming is better than other cereal crops. We can earn money in a short time with vegetable farming." He now grows enough food for consumption and sells the surplus in the market.

Min is a member of the Shree Mahadev Vegetable Production Group. There are 20 members in the group, including himself. After forming the group, KISAN provided the farmers with trainings on

improved techniques and technologies for vegetable production, and improved varieties of different vegetables. KISAN also provided knowledge on off-season vegetable production and plastic house cultivation. Using this new information Min built a plastic house on his land to grow bitter gourd and cucumber and was able to substantially increase his income.

Min plans on expanding his vegetable production to all of his farm land to increase his income even further. He



Figure 2. By growing his vegetables using the plastic house technology, Min significantly increased his income from selling high-quality bitter gourd and cucumber

also plans on growing off-season tomato in his plastic house as well as seasonal cauliflower and cabbage. Min is grateful to USAID's KISAN Project and the staff who conducted the trainings in vegetable production and marketing for helping him to improve his livelihood.

LEAD FARMER INCREASES INCOME THROUGH OFF-SEASON VEGETABLE PRODUCTION

Jajarkot

Lal Bahadur Shahi, 35, a farmer in Dashera-8, Musapuji, Jajarkot district is responsible for the well-being of his nine-member family. Lal thought that farming would never allow him the means to significantly improve his income, but after attending KISAN trainings and applying new practices and technologies on his farm, Lal is earning enough money to put some aside in savings. He and his wife, Sita, plan on earning at least NPR 50,000 from selling off-season vegetables cultivated on their land.

Through a series of agriculture trainings, Lal improved his skills and knowledge in farming. He first received support from GTZ Pasra for pond construction. Lal then entered USAID/Nepal's KISAN Project which has promoted him as a Local Service Provider (Type 2) and linked him with DADO. LSPs are farmers that KISAN engages in trainings; Type 2 LSPs (lead farmers) then apply the techniques and technologies they learn about during the trainings in their own fields, like a demonstration farm. Other farmers in the surrounding areas can then visit these lead farmers to observe the better practices and technologies at work, and see the improved yields and quality of produce. These LSPs tend to be progressive and willing to take a risk to improve their families' livelihood, and serve as educators. Lal is has learned nursery management as well as crop production technology trainings covering topics including line sowing, Jhol-mol (bio-pesticide), and pesticides safety under KISAN.

Lal currently owns five ropanis of land including two ropanis of irrigated land. As a LSP/lead farmer, Lal and his family are actively involved in demonstrating improved techniques and technologies in the production of cabbage, chili, and cucumber (which they are currently cultivating) through KISAN for other farmers in their community. "If every farmer is able to farm with these techniques, Jajarkot would transform from a food insecure district to food surplus if not food secure district." Lal said, with confidence. Lal now not only earns enough from the sale of his high-value vegetables to meet basic household needs but also saves income from farming which he once thought would only provide subsistence-level earnings. With other farmers looking to Lal and Sita for information, they are dedicated to making the demonstration a success so that other farmers in the region can see the benefits of better production technology.

HIGH-VALUE VEGETABLE PRODUCTION OFFERS ALTERNATIVE TO SEASONAL MIGRATION FOR WORK

In Lamkiphata settlements, Dhadhawar VDC-9, Mr. Ram Lal Dhaker lives with his wife and two sons. In order to support his family, Ram seasonally migrates to India to work as a rickshaw puller and struggles to earn NPR 5,000 per month. After hearing about USAID/KISAN Project from the launch in Nepalgunj, Ram joined the Kerani Samudayik Krishak Samuha farmers group and received a one-day agriculture training as well as follow up mobile training in his field. After the trainings, Ram began cultivating bitter

gourd on 10 dhur of land (less than one quarter of an acre) and earned a profit of NPR 5,000. He also cultivated cowpea and red gram on 5 dhur of land earning a profit of NPR 1,600. Ram no longer plans on migrating for work in order to make ends meet; he sees the potential income to be earned through agriculture and wants to continue to improve his yields. Encouraged by the improvement in his income from farming, Ram is eager to cultivate chili and cowpea on 2.5 katha of land (less than an acre) – once he expands production to the 2.5 katha, he could potentially earn at least four times more income. Ram is grateful to the KISAN Project for providing him with the opportunity to learn better farming techniques and improve his livelihood. He is currently looking for land to lease in order to become a commercial farmer, further expanding and improving his livelihood.

COMMUNITY REOPENS COLLECTION CENTER WITH SUPPORT FROM USAID AND LOCAL GOVERNMENT

Nabajyoti Agriculture Product collection center, Baraha-I, Ghodabash

Eight years ago, the collection center located in Baraha VDC, Ghodabash had to close down due to inconsistent performance, supply, and services. However, with support from USAID and the local government through the KISAN Project, the collection center has been reopened after forming a management committee along with other trainings and meetings on how to properly run and regulate an effective collection center.

In Ghodabash, the majority of people depend on farming for their livelihood; vegetable production is the most common in the area. In order to maintain a fresh supply of vegetables, the District Agriculture Development Office established a collection center in Ghodabash. Farmers then sold to and bought vegetables from the



Figure 1. With support from USAID and the local government, the community was able to reopen the collection center in Ghodabash, Baraha VDC

collection center; however, due to irregular supply of inputs and lack of proper output, the collection center was not operating regularly. Eight years ago, the collection center was closed.

The USAID/KISAN Project has worked in Dailekh district since July 2013. KISAN is increasing agriculture production in nine VDCs of Dailekh, including Baraha. After an initial assessment of collection centers, KISAN selected the Ghodabash collection center to receive assistance. KISAN convened 82 people (51 women) from agriculture farmers groups, local government representatives, civil society, and lead farmers from Baraha and adjoining VDCs. Representatives from USAID/Nepal and the DADO in Dailekh also attended the meeting. After discussion regarding the collection center, they formed a market management committee, Nabajyoti Krishi Upaj Market with 13 members and participation from four VDCs, VDC secretary of Baraha, Agriculture Service Center, and District Agriculture Development Office. Following the formation of the management committee and additional meetings with KISAN to discuss how to properly regulate and successfully manage the collection center,



Figure 2. Farmers weigh produce to ensure accuracy and efficiency, important for the collection center to run smoothly

the Ghodabash collection center reopened and is now known as the Nabajyoti Agriculture Product Collection Center.

With support from the KISAN Project,
Nabajyoti Agriculture Product Market
Management Committee was registered in
District Agriculture Development Office.
KISAN provided support for the collection
center to purchase necessary material, like
crates, DADO gave Nabajyoti Agriculture
Product Market Management Committee
authority to sell fertilizers and also provided I
lakh rupees for construction of a collection

center building. Additionally, the VDC agreed to allocate NPR 50,000 in the coming fiscal year. Nabajyotyi Agriculture Product Market Management Committee selected one person to handle the collection center as a collector/trader. After consistently being open, farmers of Baraha, Seri are selling their agriculture products in the collection center regularly. Now the center collects potatoes, tomatoes, beans, onions, and other vegetables, and supplies them Dailekh, Surkhet, and Nepalguni

markets. Traders average 4-5 quintals of vegetables, collecting and selling on a daily basis in the collection center during the critical season.

After starting the collection center, farmers were very happy and they are now bringing their products to nearby collection center and purchasing different fertilizers as required. They are committed ensuring and supporting to the regular operation of the MPC, and to making it a successful MPC in this region. They are grateful to the KISAN Project, District Agriculture

Development Office, and other who helped the collection center reopen and maintain regular and successful operations.



Figure 3. Farmers regularly bring produce including tomatoes, beans, and other high-value vegetalbes to the Nabajyoti Agriculture Product Collection Center

IMPROVED TECHNOLOGIES AND PRACTICES IN VEGETABLE PRODUCTION IMPROVE INCOMES OF SMALLHOLDER FARMERS IN WESTERN NEPAL

Deurali Dalit Women Agriculture Group, Narpani-6 Jagat, Arghakhanchi

Mrs. Shanta B.K, 33, lives in the Narpani VDC, Arghakhanchi district in western Nepal with her husband and four children. Shanta is a member of the Dalit community, a disadvantaged group in Nepal. Despite the challenges she faces, Shanta was determined to improve her livelihood by becoming a commercial farmer. By participating in KISAN trainings on vegetable production, Shanta was able to improve her yields and income; she also manages a formal farmers group. Her vegetable farm is so successful now that her husband was able to return home from working overseas.



Figure 1. Following KISAN trainings in a range of agricultural topics, Shanta increased her income to NPR 37,000 in one season from selling vegetables

In this area of Nepal, farming, including vegetable production, is the primary occupation for most people who are mostly smallholders earning low incomes. Shanta is a farmer, housewife, and vegetable retailer, growing vegetables on the two ropani (less than one acre) of suitable agricultural land that her family owns. Her husband worked overseas as a migrant laborer in order to support the family. Being a strong and determined woman, Shanta was looking for opportunities to improve her families' standard of living.

Shanta participated in focus group discussion where she learned about the KISAN Project. Following the



Figure 2. Shanta's husband, Jhagilal, was able to return from being a migrant laborer due to her increased income from selling vegetables

discussion and household member selection, she was trained in how to raise vegetables. She attended technology demonstrations and agriculture training sessions such as crop planning and linkages, vegetable nursery management and crop production management (tomato, cauliflower, cucumber, cowpeas, chili, and bitter gourd), crop plantation technology, post-harvest and marketing training, and demonstration of bio-pesticide (*Jholmol*) preparation. She learned about new technologies that can improve productivity and how engaging in both seasonal and off-seasonal vegetable production can further increase her income. Shanta also joined the *Deurali Dalit*

Women Agriculture Group in Jagat, Arghakhanchi. Of the 16 members (all of whom are women and from the dalit community) in this agriculture group, she is one of the most active members and is currently serving as Secretary for the group.

By producing a variety of vegetables on her farm, Shanta was able to earn NPR 37,000 in one season and with continued harvesting, will increase her income to an average of NPR 42,000 per season. She has started a nursery with early varieties of cauliflower and cabbage which can be sold at higher prices in the market. Shanta is actively involved in the Deurali Dalit Women Agriculture Group, which was first established in 2010 with cooperation from District Agriculture Development Office (DADO), Arghakhanchi. However, the group was not very active in previous years. Because of Shanta, the group is now active and has received various vegetable production technologies and training organized by

USAID's KISAN Project; and the group's irrigation facility was supported by DADO, Arghakhanchi. "I believe vegetable production, if done in use of technology and scientific way, can bring economic change in my family life as well as my group's fellow members, too."

The KISAN trainings changed the way Shanta thinks about vegetable production. After attending all of the training sessions and demonstrations, she applied the new technologies and practices to her vegetable farm. Shanta is very happy with the resulting increase in vegetable production on her small plot and is looking forward to becoming a commercial farmer; her fellow



Figure 3. Using the technologies and practices she has learned, Shanta plans to expand her production and motivate members of the dalit community

farmers were also successful in increasing their vegetable production. Shanta is no longer just producing vegetables for consumption – she is now able to sell surplus produce to a nearby market. She has been able to give back to her agriculture group, which helps train women of the community in bettering their vegetable production technology. She is a prime example in the Dalit community of how access to knowledge-based training and technology motivates and can help marginalized communities overcome barriers to successful vegetable production.

SMALLHOLDER FARMERS EARN HIGHER INCOME THROUGH OFF-SEASON VEGETABLE PRODUCTION

Charan Singh Chaudhary lives with his wife and three children in Saudiyar-2, Guruwagaun, Dang district where he farms on 0.33 hectares of land. As a member of a farmers group enrolled in the KISAN Project, Charan attended agriculture trainings on a variety of subjects aimed at improving yields and quality of high-value agriculture products, like how to build and use plastic houses for vegetable cultivation. After adopting these new practices and technologies, Charan has doubled his income and established a sustainable livelihood for himself and his family. Other villagers have seen his success and are eager to follow suit.

Charan, like most of the farmers in his area, used traditional agriculture techniques resulting in little income/profit. In order to improve his livelihood and that of his family, Charan joined the Namuna Tarkari Krisak Utapadak Samuha group in 2011, which is registered with the DADO in Dang. The DADO provided support for a water pump for the group to use for irrigation. The group also works

with Om Namaha Pandewar Cooperative Ltd. to improve their farming. However, there were still other improvements that Charan and his group wanted to achieve.

In 2013, the KISAN Project, funded by USAID, launched in 20 districts, including Dang, and Charan's group enrolled in the project. KISAN provided the group with technical assistance including agriculture trainings on new technologies and practices such as vegetable production under plastic houses, drip irrigation, bio-pesticide preparation, and integrated pest management.



Figure 1. Charan applied multiple technologies and practices, like growing vegetables in plastic houses, raising seedlings, and using bio-pesticide, and as a result, he has doubled his income

As a result of the KISAN trainings, Charan made a 15 x 6 m² plastic house and grew the "Super dynesty" cucumber variety and "Palee" bitter gourd variety in the winter season using different practices such as seedling raising, line sowing, deshooting and disbudding, stalking method, sanitation of field, etc. Following the growing season, Charan harvested 7.5 quintal of cucumber and sold it at an average price of Rs. 25 per kilogram which translates to Rs.18,750 per 90 m² using homemade biopesticide. He also harvested 4.5 quintal of bitter gourd outside of the plastic house and

earned Rs. 9,000. "By KISAN support and off-season vegetable production technology, I have doubled my income," Charan said.

Other members of his group and others in the village saw Charan's success in productivity, yield, and income and were surprised that he could earn Rs. 30,000 from a small plot of land. His group members are interested in replicating the techniques Charan is now using on their own farms; 5-10 members are planning to build plastic houses for the winter with loans from Om Namaha Pandeswar Cooperative Ltd. After harvesting, Charan raised seedlings in plastic trays for rainy season tomato and he expects to make about Rs. 35,000-40,000. USAID/KISAN also provides support for the group to maintain the water pump which helps the members with their rice production at present. Now that the group can properly maintain the water pump, they are able to establish a nursery for rice; before they had to wait for the rain.

ANNEX VIII. INTERNSHIP REPORT

M&E interns

In the KISAN M&E system, each activity and training needs to be entered into the WIKISAN database. M&E data collection forms for individuals, groups, activities, and organizations are printed out and filled in. This data then needs to be entered into WIKISAN. In view of expediting the data entry process, and avoiding excessive use of staff time in managing the system, KISAN has hired 15 M&E interns to support M&E and other activities. KISAN gives young professionals the opportunity to work in the office and develop some basic skills. District and regional staff have trained these M&E interns to enter the real time data properly. The internship program seeks to build the professional capacity of disadvantaged youth graduates. Most of these M&E interns are women and from marginalized groups from project districts.

Details of Interns:

S.N.	Name of Intern (new appointed)	Districts	Join date
1	Mr. Hum Bahadur B.K.	Arghakhanchi	June 22, 2014
2	Ms. Bishnu Sanami	Gulmi	June 25, 2014
3	Ms. Trisana Kamu	Palpa	June 24, 2014
4	Mr. Azizullan Khan	Kapilbastu	June 8, 2014
5	Mr. Raj Kumar Kurmi	Kapilbastu	July 1, 2014
6	Ms. Kalpana Roka	Rolpa	June 26, 2014
7	Ms. Urmila KC	Rukum	June 29, 2014
8	Ms. Durga Roka Magar	Dang	June 11, 2014
9	Ms. Bhajan Kumari Budha	Achham	June 10, 2014
10	Mr. Ashim Singh	Doti	June 22, 2014
11	Mr. Vikash Upreti	Dadeldhura	June 19, 2014
12	Mr. Navraj Pandey	Baidati	June 24, 2014
13	Ms. Kabita Rokaya	Kanchanpur	June 10, 2014
14	Ms. Kamala Upadhaya	Kailali	May 20, 2014
15	Ms. Kalpana Regmi	Surkhet	June 26, 2014

S.N.	Name of Intern (extended)	Districts	Extension date
			from
1	Mr. Santosh B.K.	Jajarkot	July 1, 2014
2	Ms. Amrita B K	Dailekh	June 13, 2014
3	Ms. Sharmila Tharu	Banke	July 2, 2014
4	Ms. Ramita Jhakri Magar	Dang	June 26, 2014
5	Ms. Beskala Bk	Pyuthan	July 8, 2014
6	Ms. Kamana Shrestha	Pyuthan	July 5, 2014